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Fair World 64: A Text-Based Game of the 1964–1965 World's Fair

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FAIR WORLD 64:

A TEXT-BASED GAME OF THE 1964-1965 WORLD'S FAIR

by

CHRISTOFER GASS

A master's capstone project submitted to the Graduate Faculty in Digital Humanities in partial fulfillment of the requirements for the degree of Master of Arts, The City University of New York

2020

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This manuscript has been read and accepted for the Graduate Faculty in Digital Humanities
in satisfaction of the capstone project requirement for the degree of Master of Arts.

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ABSTRACT

Fair World 64:

A Text-Based Game of the 1964-1965 World's Fair

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Christofer Gass

Advisor: Michelle A. McSweeney

The project is a text-based game of a typical day during the first season of the 1964 World's Fair in what is now Flushing Meadows-Corona Park. The 1964-1965 World's Fair, that Robert Moses presided over as president, was one of the largest and most expensive fairs ever created, but only days after the last fairgoer left through the turnstile most of the many pavilions that brought education, entertainment, and joy to so many people were destroyed to leave a vast open space that is relatively empty to this day. Although most of the pavilions were either relocated or demolished, there are a few structures and traces that live on since the end of the second and last World's Fair in Flushing Meadows-Corona Park. Pavilions such as the New York City Pavilion and the Singer Bowl, which are now the Queens Museum and Louis Armstrong Stadium, respectively, are still visited and enjoyed to this day, and renovations to other significant parts from the Fair, such as the towers of the New York State Pavilion and the Pool of Reflections, are further signs of life from the Fair's half century past.

However, these are only small facets of the World's Fair that are still a part of the Park. During the 1964-1965 seasons there were more than 150 pavilions and over 51 million people from all over the world came to visit. For most of Flushing Meadows-Corona Park, the lack of infrastructure is a significant void from the once heavily populated fairgrounds. Once something is destroyed it is difficult to then piece it together in a meaningful manner, but with the assistance of technology, software and information new approaches can be disseminated for a larger audience to experience, enjoy and gain a better understanding of the 1964-1965 World's Fair. This significant event of the City's history deserves another avenue to inform and through a text-based game, a new audience can learn about the Fair and its historical context as well as allow an older generation to delve into the digital realm.

PREFACE

This project has grown from my mother's memories of the 1964-1965 World's Fair, her interest to scan and document photographs of her family's visit, and my own interest of the Fair. My mother went with her family to the Fair a few times during its two-season run and my grandfather documented the historical and cultural phenomenon extensively. There are numerous carousels of color negatives my mom had begun to scan, to only have the data become eradicated shortly after. I have not seen any of these slides, and my enthusiasm to look them over, scan, digitalize, archive and disseminate to family has created a void that has only intensified my interest, investigation and research of the Fair. Also, I was around traces of the Fair before I ever went to the site. My county fairgrounds in Orange County, New York, has dozens of the repurposed multi-shaped light fixtures that not only lit, but entertained the World's Fair attendees. When I was young, I remember enjoying their design and being memorized by their Tetris shaped forms and bright vivid colors.

This project is a way to reimagine the Fair for a current audience, as well as for the people who went to the Fair over 50 years ago. The Fair was a way to relax, unwind and enjoy in the time shortly after the assassination of President John F. Kennedy, during the Cold War and the beginning of the Vietnam War. The Fair has become a culturally historic event due to the events that took place, its infamous president, Robert Moses, and the history the pavilions showcased and explained, as well as became – a handful of pavilions remain within the park and elsewhere.

The text-based game takes place during the first season of the Fair and stars a young kid who biked to the Fair from their nearby neighborhood in Queens out of interest to visit. While at the Fair the player controls the avatar through pavilions while they learn about their exhibits. In addition to pavilions, the avatar navigates to features of the Fair such as fountains, sculpture, important people and miscellaneous items such as the artistic light fixtures.

The purpose of the game is to help inform of some of the facets of the Fair for a new generation of interested individuals, as well as for those who went or wanted to go but were not able to. The information provided in the text-based game are from sources provided from the Fair Corporation, scholarly material, and from visiting the site. During the course of this project I ventured to Flushing Meadows-Corona Park numerous times to look over and gain a better feel for some of the objects I learned about and to walk the area to gain a better understanding of the epic experience that took place over 50 years ago.

An obvious problem for much of this project was the unfortunate crisis that took place during the late winter/spring of 2020, which not only made it difficult to meet with my advisor and attend instrumental programming at CUNY, The Graduate Center, but research I planned to do in-house at many archives throughout the city. This is an unfortunate crisis for not only me, but for everyone around the world, as well. However, this also gave me time to reflect and further work on the code for the game when I would have been doing further research.

Before the crisis, I had spent many wonderful hours within New York Public Library's Manuscripts and Archives Division and Lionel Pincus and Princess Firyal Map Division. While

at the Stephen A. Schwarzman Building, I went through dozens of the 1523 boxes from the New York World's Fair 1964-1965 Corporation and all the maps of the Fair. Also, during a meeting with Queens Museum staff I was able to discuss and showcase the game to them to possibly exhibit it within their World's Fair Collection exhibit.

ACKNOWLEDGEMENTS

Foremost, I am deeply appreciative of the support of Michelle A. McSweeney through all phases of this project. As my advisor, McSweeney read multiple drafts of my writing, played initial versions of the text-based game, and assisted me with the direction of the project. Rafael Davis Portelo, a Digital Fellow at CUNY, The Graduate Center, was exceptionally helpful with assisting me with my code, as well as Stephen Zweibel, Data & Digital Projects Librarian at CUNY, The Graduate Center. My sincere thanks also go to Matthew K. Gold, Lisa Rhody, Patrick Smyth, Jason Nielsen, and all my cohorts within the Digital Humanities program who gave me advice during the creation of the project and endlessly encouraged and inspired me. Another invaluable source throughout the semester was the Writing Center at CUNY, The Graduate Center, especially, Shiraz Biggie for her help with my proposal and David Hershinow with my white paper.

My parent's interest in art and Americana collection and curation through their life has been the most impactful and encouraging force behind my own interest within this project. I knew my father, Timothy Gass, not only by his actions, but the many items he surrounded himself with and left behind after his death. Although my father did not go the 1964-1965 New York World's Fair, he lived and experienced a lot of what the Fair represented – which is still hard to grasp with a year of researching the Fair.

Rhonda L. Planson Gass, my mother, was instrumental in building my interest in the 1964-1965 World's Fair. Her fond memories of the Fair as a child and her eagerness to digitally preserve the collection of photographs her father took were what sparked my interest and drove me to do further research. I base a character in the game after her when she told me that while standing in front of the Unisphere when she was a kid, she felt like she was staring at the whole world, due to its enormous size.

Bo Bartlett, my former employer, informed me he asked his father if they could go to the 1964-1965 World's Fair and was told they would. However, they never went. This stuck with the artist throughout his life. He created a painting of this promise in two variations; *Promise* and *Kingdom of Ends* from 2007 and 2009, respectively. I worked with Bartlett as a studio assistant and primarily focused on the artist's catalogue raisonné. After years of dedicating my time in the studio, as well as volunteering with him, he gave me a few parting gifts before I left to pursue my master's degree. One of these is a signed giclée print of *Kingdom of Ends.* This print hangs above the desk in my apartment and his story and art remind me of all the people who wanted to go to the Fair but were not able to, in addition to all the other people who would have wanted to go after its two season run.

The NYPL staff, especially Tal Nadan, were especially helpful during the dozens of hours I spent at the library researching through their New York World's Fair 1964-1965 Corporation records. Regarding my experience on the quickness I received my ordered items a Robert A. Caro quote comes to mind, "Coming to the Library, whatever I was looking for I seemed to be able to find in the archives . . . You'd go up and put in that pink slip, and an hour

later, the stuff would appear on your desk -- old maps, Robert Moses's Ph.D thesis, the Yale Poetry magazine his poems had appeared in -- it all seemed to be there."

In the Winter of 2020, I met a woman during one of my ground truthing adventures through Flushing Meadows-Corona Park. The woman, who I will keep anonymous, was with her husband, and they were looking over the site of the New York State Pavilion. I judged by their age that they would have been young during the time of the Fair and asked if they went. She stated that yes, she went and that her school choir performed in the Tent of Tomorrow within the pavilion. I thought this was wonderful and just what I wanted the avatar to experience within the game. When I asked if it was alright to add her story to the game, she stated that it was. Through further discussion I was informed the song they sang was "All Things Are Coming Moses".

DIGITAL MANIFEST

I.   **Dissertation Whitepaper (PDF)**

II.   **WARC files**

    a. **Project Website**
       Archived version of GitHub repository at time of deposit.

III.   **Code and other deliverables**

    Zip file containing the contents of the GitHub repository at time of deposit.

A NOTE ON TECHNICAL SPECIFICATIONS

First download the Python file from the repository. Once downloaded the file can then be opened in the command line to be played. if Python 3 is not installed install Python 3. The player types the controls 'left', 'right', 'yes', and 'no' to navigate the avatar through the eastern side of the fairgrounds. There are three ways the player can complete the game: run out of money, run out of time, or reach the Lake Amusement Area or Transportation Area. Once the game has ended the screen will quit back to the command prompt window.

The layout of the text-based game has the player control an avatar through the right side of the 1964 Official Souvenir Map of the 1964-1965 New York World's Fair. This section crosses through all five areas of the Fair. Within this section of the map in the game there are 59 pavilions represented, as well as four fountains, one president of the fair, a sculpture, and a light fixture. The avatar begins at the central-east side of the map at the Court of the Five Boroughs in the Industrial Area on the border of the International Area. The avatar then moves through the State and Federal Area to either the Amusement or Transportation Area, depending on the path the avatar follows and the money and time allotted.

The information utilized in the game is derived from a spreadsheet created from the combination of information scraped from the Official Souvenir Map New York World's Fair and 1964 Official Guide Book. The spreadsheet contains titles from the map with price of admission, hours of operation, restaurant and snack food descriptions, exhibitions, notes and page reference from the guide book.

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NARRATIVE

Provide a description of the Capstone Project

The layout of the text-based game has the player control an avatar through the middle section of the right side of the 1964 Official Souvenir Map of the 1964-1965 New York World's Fair. This section crosses through all five areas of the Fair. Within this section of the map in the game there are 59 pavilions represented, as well as four fountains, one president of the fair, a sculpture, and a light fixture. The avatar begins at the central-east side of the map at the Court of the Five Boroughs in the Industrial Area on the border of the International Area. The avatar then moves through the State and Federal Area to either the Amusement or Transportation Area, depending on the path the avatar follows and the money and time allotted.

Once the text-based game is opened to play, the player is presented with a simple logo of the game in ASCII art and then asked to provide their name. The program then states "Hello," followed by the provided name with an exclamation mark. The dialogue is continued with a paragraph to inform the player the avatar rode their bike from a nearby neighborhood to visit the Fair. Once outside the Fairgrounds the avatar is informed, they can jump over the fence. The avatar is also informed the $2.35 they have is from their older sibling's piggy bank. Instead of purchasing the one-dollar admission the avatar instead wanted to save the money for exhibits and snacks. This reference is from documentary footage of the Fair, titled *The 1964 World's Fair*, where two individuals state they would jump the fence to avoid the dollar admission when they were kids. This early statement is intended to follow with a childish carelessness combined with learning aspects of the Fair through the game. The next sequence is a choice of either learning about the areas of the Fair or moving on to the next part of the storyline.

The option to jump the fence is the first choice, of many choices, the avatar is faced with.

If the avatar chooses to move ahead, they continue through multiple pavilions and other features

of the game. If the avatar typed in a choice in the negative the program prints goodbye followed

with their name and then the program shuts down. If the avatar prints anything other than the

form of the answer throughout the game, the program repeats the question indefinitely until the

correct answer is entered. After the avatar jumps the fence they are told they are at the Court of

the Five Boroughs in the Industrial Area. The next choice is if the avatar would like to know

more about the areas of the Fair. If the avatar decides to know more about the areas a small

description of each of the areas are listed, if the answer is negative the avatar is brought to the

next decision. From this point of the game the avatar passes through the pavilions and additional

features of the Fair until they either run out of money, time, or make it to the Amusement Area

or the Transportation Area. The avatar has $2.35 to start with and the money amount depletes

through certain admission of certain pavilions and exhibits or meals and snacks. After the avatar

is asked whether they want to pay for something after they jump the fence, and the answer is in

positive, the money will decrease the amount initially printed and then the money left is printed

on the screen. The varied prices for each of these are based off actual amounts from the World's

Fair Guide Book from the Fair. Major sections of the book were manually scraped and added

into an excel spreadsheet. This was done due to there not being an OCR version of the book.

After geographically locating the longitude and latitude of the pavilions from Google Maps,

imported the spreadsheet to Tableau to visually represent the data and utilize as a tool for the

project. The exhibit information and notes within the Guide Book were instrumental in informing

the pavilions with relevant information. The time facet of the game works with starting the time

amount with 240 minutes and then having the time amount deplete after passing through each

pavilion or feature. However, the avatar is never informed of what time it is throughout out the game, only that it is the afternoon time. These time amounts were based off the Shell Map of the Fair, which gave an estimated time that it took to visit a pavilion and see the exhibits within. Once the time runs out the avatar is greeted with a goodbye statement followed by their name. If the avatar can make it through to the Transportation Area of the Fair or the Amusement Area the avatar then passes through one or two to three or four pavilions, depending on the Area, before greeted with a goodbye followed by their name. While the avatar moves through the game they decide 'yes' or 'no', which can either be typed 'YEAH', 'Yeah', 'yeah', 'YES', 'Yes', 'yes', 'YEAH', 'Yeah', 'yeah', 'YEP', Yep', 'yep', 'Y' or 'y'. With the negative being a similar sequence. Other choices are 'left' or 'right', which can be typed 'LEFT', 'Left', 'left', 'L', or 'l'. With the 'right' decision being a similar sequence as well. Within a 'yes' or 'no' decision there a few 'random' scenarios. If the answer is positive the random sequence will pick one of a few possible options, which adds to the randomness of the game play and replay ability. Within a pavilion the avatar learns general information of the building, building's sponsor and about one of the exhibits. A feature within the code slows the output of the print so the player is not bombarded with too much print at a time.

Text-based games have been created and played since shortly after the advent of the computer and they continue to be enjoyed to this day. The text-based game Zork, created in the late 70s, is still available online for download and to play. Also, millions of school children in the United States from the past two generations grew up learning from computer games such as "The Oregon Trail" and "Math Muncher". Gamification has been utilized in the classroom for decades. I wanted to try mimic games used for elementary learning. The gameplay is simple, but informative. In James Gee's book *What Video Games Have to Teach Us About Leaning and*

Literacy? the author states that if the player is playing to learn actively and critically, "they situate meaning in a multimodal space through embodied experiences to solve problems and reflect on the intricacies of the design of imagined worlds and the design of both real and imagined social relationships and identities in the modern world." A game utilizes an enjoyable environment where players can have fun and learn. Fun and a general interest in an activity is fundamental for flow to take place within a game. When a player is absorbed in an activity where they are problem solving the sense of monotony is lost, and a feeling of joy is gained. Similarly, in the article "the concept of flow in collaborative game-based learning" the authors state, "Games in education seem to be excellent ways to combine meaningful learning with fun".

Within the project, there was an attempt to create the language and simplicity of the gameplay for a diverse group of people young and old to allow for ease of movement through the game. However, if the game poses challenges too difficult for the player anxiety is felt. Likewise, if the gameplay is too simple the player loses interest. So, through the game there are pauses to allow for breaks within text of the game. I did not add any questions that were other than 'left', 'right', 'yes', 'no', and the player's name for ease, but changed the variation of the output to resist boredom. Also, in addition to ease of play or difficulty, interest is key to flow. Someone who is interested to learn more about the 1964-1965 World's Fair will enjoy the gameplay more than someone who is not interested. For anyone who plays the game and were initially not interested about the Fair, I hope to change their mind or give them a second look.

Another aspect in regards to gameplay is the experience itself becomes the reward. With an interest to add a scoring function and a leaderboard at the end for friends, family and coworkers to share and brag, I decided to allow for the information gathered within the game to be the reward. With 59 pavilions throughout the created space, there is plenty for the player to

experience while maneuvering the avatar through the game before they run out of money, time and pavilions to visit.

During my first meeting with my advisor, Michelle A. McSweeney, we discussed a game approach to the Fair. We considered how the game would look, from what perspective it would be and what materials from my previous maps and data visualizations that could be transitioned over for the text-based game approach. There was to be a story, multiple avatars, interactivity and a money and time variable. For the sake of completion within the semester we discussed feasibility and what technologies I already knew. I decided to utilize Python for the creation of the game due to my knowledge of the software from Patrick Smyth's Software Development Lab.

Major facets of the game are functions and variables to allow for the player to control the avatar through pavilions, among other details, of their choosing, working money and time variables add to the functionality throughout the space. For each of the answers the player prints there is not only a 'left' and 'right' or 'yes and 'no' option, but if the player types anything other than the right answer, the question is printed again until the correct answer is submitted. There is one of these strategically placed within each definition.

The impetus for the project is to reimagine the 1964-1965 World's Fair for a new audience who were not able to go to the Fair, as well as for those who went during the two seasons the Fair was open and would like to revisit, virtually. My mother went to the Fair with her family numerous times and documented their visits through photography. Since that time my mother started the process of digitizing the photos, but to no avail. The computer she was storing the data on crashed and her progress was lost. With my own interest in digitization for the preservation of important keepsakes and artifacts as photographs, I became interested in this

venture. However, with the color slides stowed away in my grandmother's storage space above her garage in Florida, I have not been able to get my hands on them to digitize. This has created a void that I have tried to fill by better understanding and reimagining the Fair through visiting the site, research, mapping, data visualization and, now, gameplay.

Practices that worked best to build the game itself were using pre-existing tutorials and getting help on the code from the Digital Fellows. I started by reinterpreting a text-based game example from Zed Shaw's *Learn Python the Hard Way*. I had already done significant research on the Fair in the past year and had worked on my own text-based game after completing Smyth's Software Development Lab. So, I knew that I wanted to start from one point and have the avatar go through a portion of the Fair. I wanted to have the avatar go through only a part of the Fair, not the whole Fairgrounds, because it was not realistic to see all the pavilions in one day. A practice that worked best for understanding this was to revisit the physical fair site while I worked on this project. However, due to the current pandemic, the neighborhoods of Flushing and Corona where Flushing Meadows-Corona Park resides were a heavy hit area. The USTA Billie Jean King National Tennis Center, which was the United States Pavilion during the two seasons of the fair acted as a hospital. So, I was unable to visit the park during most of the Spring of 2020 semester.

The Python User's Group (PUG) held by the Graduate Center Digital Fellows, was an invaluable source during the first half of the Spring 2020 semester (before the COVID-19 pandemic shutdown). I was able to talk to numerous Python programmers about aspects of my game that I was having issues with or had questions about and was able to get assistance immediately. During the first half of the semester, I tried to work out problems on my own by searching online. When I was not able to get past important aspects of the game, by myself, I

reached out to Digital Fellows virtually. My consultation with Digital Fellow Rafael Davis

Portela was valuable for getting through a significant portion of my text-based game. He was

able to assist me with the implementation of a money function.

Also, other practices that are more holistic than analytic were to engulf myself in all

things 1964-1965 World's Fair during the duration of this project. As stated before, I regularly

visited the Park where the Fair was held. During a visit to the Queens Museum, which was the

New York City Pavilion during both Fairs, I visited the gift shop both to pick up the book,

Remembering the Future, and to buy a postcard that resembles a child's ticket stub for the 1964-

1965 World's Fair. I keep this postcard on my desk to help keep my mind in focus. Another

anecdotal study habit is drinking Stone Street Coffee Company's World's Fair 1964 that is sold

at my local grocery. A real artifact that I purchased and have hung up near my workstation is the

Official Map for the first season of the Fair. Not only do I point to it often to ensure correct

directionality within the game but used it to stick post it notes to visually mark updates I made

within the code of the text-based game. Also, hung up to the right of my map is a print of Bo

Bartlett's *Kingdom of Ends* painted in 2009, which depicts the Unisphere. Another keepsake I

have from the time of the Fair is the official stamp that came out that year. My father was a

stamp collector and I am very fortunate to have a few copies of the stamp that I can keep near my

desk, as well.

Relationship to Focus Area and Previous Course of Study

The capstone project relates to my DH focus area and previous coursework by being built

from work I did in Introduction to Digital Humanities and Introduction to Data Visualization and

Design: Fundamentals. My focus within the Digital Humanities is Geospatial and this project has

allowed me to take this field and implement it into my text-based game. During the Fall 2019

semester, I created a map of the Fair in Tableau with the pavilions as points with information about the pavilions as tooltips. I also created a plan of the Vatican Pavilion which was georeferenced to include tooltips of the exhibits within the Pavilion.

A course that helped facilitate my Python knowledge was Patrick Smyth's Software Development Lab. In the course, Smyth instructed us to work on examples from Zed Shaw's *Learn Python the Hard Way*. Example 35 is a text-based game. This example became the premise of my project. Throughout the course we utilized the command line and the text editor Visual Studio Code. This was instrumental in the implementation of a structure for writing code and was essential for the creation of my text-based game.

While in Geospatial Humanities during the Spring 2020 semester, I utilized an official souvenir map that I purchased online of the first season of the Fair to assist with which pavilion the avatar should go to next. The map was also used as the basis for the titles of the pavilions, which differed slightly through the planning stages and the two seasons of the Fair. For instance, the Louisiana Pavilion was later renamed Bourbon Street and the Sierra Leone Pavilion became the United Nations Exhibit.

Another course that was instrumental in the creation of this capstone was Archival Encounters: The Future of the Book. In Lisa Rhody's Archival Encounters course, the class visited the Morgan Library and NYPL's Schomburg Center for Research in Black Culture and Stephen A. Schwarzman Building. Of those visits, The Schwarzman Building was the most fruitful for this project. During the visit we met Tal Nadan from the Manuscripts and Archives Division of the NYPL. Tal was very helpful during that visit. While working on my capstone project, I had heard from a classmate that there was an extensive collection of World's Fair

artifacts at the NYPL. I then contacted Nadan to make an appointment to visit the Archives and Manuscripts Division. There I found more than 1500 boxes of material in their collection.

An additional course taught by Lisa Rhody during the Fall 2019 semester was Methods of Text Analysis. In the course the class close read texts and this was helpful in creating my storyline for the game. I did not want the avatar to go by a sex identification. Something I noticed early on is that the Guide Book utilized the masculine pronouns him, his, he often. I did not want to implement this with the text-based game. With that in mind I kept the sex of the avatar gender neutral. I also thought about individuals with impairments while I wrote the storyline. I refrained from utilizing the verb 'see'.

Evaluation

An aspect of the game that was in my original proposal but did not make it to my game was multiple avatars to choose from. I wanted to have not only a kid from Queens, but persons of multiple ages and backgrounds. Other avatars considered were a young international couple that flew to LaGuardia Airport then helicoptered to the Fair via the Port Authority Heliport, a family of four or five from the Midwest who drove to the Fair and two grandparents from Manhattan who took the subway to the Fair with their grandchildren. There were to be different descriptions of the pavilions and story lines would have been altered for each of the avatars. However, this aspect became daunting and realized early on that it would be out of the scope of the project to complete. So, the text-based game was created around one avatar, a kid from a nearby neighborhood who rides their bike to the Fair.

The largest set back to not only my capstone, but the world, was the unprecedented nature of the COVID-19 virus. An important process for me is to organically process events,

such as the World's Fair, and take in the environment where it took place by walking it numerous times, or ground truthing. I have been to the park several times over the past year, but I would have liked to spend more time there in the past few weeks. Another similar set back is that I have not been able to visit the Manuscripts and Archives Division at the Schwarzman Building, Queens Library or Queens Museum. These setbacks were handled by going through online sources such as the Queens Library Digital Archives.

Major successes of the project were the creation of over a third of the pavilions that were represented at the Fair, a working money and time function, and replay ability. There are several pavilions to visit and revisit throughout the game, within certain pavilions only one of a possible few answers or outcomes will be presented. So, it would be very difficult to have the same experience again. The pavilions utilized within the game are a small cross-section of all the Areas. Instead of hand-picking pavilions to utilize within the game I decided to create a storyline for pavilions that resided next to one another located on the right side of the map, until a significant amount was created to allow the avatar to pass through all the Areas. The money and time function allow for further different outcomes. This all leads to more options of different game play the player can experience.

Limitations of the project are the player cannot choose from a variety of avatars, not all the pavilions are represented and the lack of visuals. Although all the areas of the Fair are represented, not all the pavilions have been included within the game. There were over 150 pavilions and knew from the start I would not be able to add all of them, but it would have added to a fuller experience if all were incorporated. Imagery would be impactful to indicate where the avatar is within the Fair and what they are seeing. However, python is unable to represent visuals within the command line.

Continuation of the Project

I plan to continue working on the game once it is submitted for completion of my MA. This is out of a desire to complete the text-based game to a level I know it can become. There are some aspects of the game that were initially discussed that I would like to take on. Imagery and item collection throughout the game which was brought up by my advisor and program director. Also, multiple avatars to choose from is important due to allowing more range of people to assimilate to the avatar within the text-based game. Additionally, it has been brought to my attention on a couple of occasions imagery within the game would make for a fuller experience and I would like to try to incorporate into the next version of the game. Also, the Digital Humanities program director, Matthew Gold, made a comment about the gameplay that has continued to stay with me. Gold stated that it would be of interest to have objects throughout the game the avatar would be able to pick up and utilize in the game. When this was brought up, I knew it would be out of the scope of the project. However, throughout the semester I have questioned whether I would be able to implement in the capstone project. Ultimately deciding not to add to the current project, it is something I have continued to think about and would like to add to the next phase of the game. Another aspect I would like to build is a standalone platform where the game can be housed and played online. Which would be implemented with Django, a high-level Python Web framework. Also, I plan to work with the Queens Museum to implement this text-based game within the Museum's World's Fair Exhibit. So, depending on the outcome of those discussions the game may change a little to extensively.

SELECT BIBLIOGRAPHY

Admiraal, Wilfried and Janita Huizenga. "The concept of flow in collaborative game-based learning." *Computers in Human Behavior,* 2011, doi:10.1016/j.chb.2010.12.013.

Bletter, Rosemarie Haag. *Remembering the future: the New York World's Fair from 1939-1964.* Rizzoli International Publications Inc., 1989.

Caro, Robert A. *The Power Broker: Robert Moses and the Fall of New York.* London, The Bodley Head, 2019.

Cotter, Bill, and Bill Young. *The 1964-1965 New York World's Fair.* Arcadia Publishing, 2013

Cotter, Bill, and Bill Young. *New York World's Fair 1964/1965*, 24 Mar. 2020, www.nywf64.com/index.html.

Gee, James. *What Video Games Have to Teach Us About Learning and Literary*. New York, Palgrave Macmillian, 2003.

Hanley, R. (Director). (1996) *The 1964 World's Fair* [Film]. Connecticut Public Television.

Jayakanktan, R. "Application of computer games in the field of education." *The Electronic Library*, 2002, pp. 98-102.

Plass, Jan and Homer, Bruce. "Playful Learning: An Integrated Design Framework." *Technical Report*, 2014, doi:10.13140/2.1.4175.6969.

Samuel, Lawrence R. *The End of the Innocence: The 1964-1965 New York World's Fair*. Syracuse Univ. Press, 2010.

Shaw, Zed. *Learn Python the Hard Way: A Very Simple Introduction to the Terrifyingly Beautiful World of Computers and Code.* Upper Saddle River, NJ, Addison-Wesley, 2014.

Wood, Norton. *Guide to the New York World's Fair*. Schiefelin & Co., 1964.

APPENDICES

List of Variables

global gold	Money function
gold=2.35	Amount of money the avatar begins with
print ("You now have $",gold)	Prints the avatar's money amount
if gold <= 0:	'No money' definition prints
global total	Time function
total=240	Number of minutes the avatar begins with
if total <= 0:	'No time' definition prints
choice = input	Function for 'yes' or 'no' decision
if choice == "yes":	"yes" path
elif choice == "no":	"no" path
else:	repeats question
choice = input	Function for 'left' or 'right' decision
if choice == "left":	"left" path
elif choice == "right":	"right" path
else:	repeats question
choice = input	Function for random sequence
if choice == "yes":	"yes" path for random sequence to print
randint = random.randint(0,2)	function for random sequence to print
if randint == 1:	first sequence
elif randint == 2:	second sequence
elif randint == 3:	third sequence
elif choice == "no":	"no" path
else:	repeats question
time.sleep(#)	Sequence pauses for second amount in '()'

Glossary of Functions

PAVILIONS

def african_pav(): Description of the African Pavilion.
def afria(): Pay to enter choice.
def afrib(): Exhibition description.
def afri1(): Where to next choice.

def alaska_pav(): Description of the Alaska Pavilion.
def al1(): Where to next choice.

def amind_pav(): Description of the American Indian Pavilion.
def aminda(): Pay to enter choice.
def amind1(): Where to next choice.

def americanisrael_pav(): Description of the American-Israel Pavilion.
def amera(): Pay to enter choice.
def amerb(): Exhibition description.
def amer1(): Where to next choice.

def austria_pav(): Description of the Austria Pavilion.
def aus1(): Where to next choice.

def belgium_pav(): Description of the Belgium Pavilion.
def bela(): Pay to enter choice.
def belb(): Exhibition description.
def bel1(): Where to next choice.

def christianscience_pav(): Description of the Christian Science Pavilion.
def chris1(): Where to next choice.

def chrysler_pav(): Description of the Chrysler Pavilion.

def cki_pav(): Description of the Chun King Inn Pavilion.
def ckia(): Pay to eat choice.
def cki1(): Where to next choice.

def clairol_pav(): Description of the Clairol Pavilion.
def clair1(): Where to next choice.

def circus_pav(): Description of the Continental Circus Pavilion.
def cca(): Pay to enter choice.
def cc1(): Where to next choice.

def eastman_pav(): Description of the Eastman Kodak Pavilion.
def east1(): Exhibition description.
def east2(): Where to next choice.

def fncb_pav(): Description of the First National City Bank Pavilion.
def fncb1(): Where to next choice.

def garden_pav(): Description of the Garden of Meditation Pavilion.
def gara(): Exhibition description.
def gar1(): Where to next description.
def gar2(): Where to next choice.

def gc_pav(): Description of the General Cigar Pavilion.
def gc1(): Where to next choice.

def ge_pav(): Description of the General Electric Pavilion.
def ge1(): Where to next choice.

def gm_pav(): Description of the General Motors Pavilion.
def gm1(): Exhibition description.
def gm2(): Where to next choice.

def greece_pav(): Description of the Greece Pavilion.
def gre1(): Where to next choice.

def guinea_pav(): Description of the Guinea Pavilion.
def gui1(): Where to next choice.

def hall_pav(): Description of the Hall of Free Enterprise Pavilion.
def halla(): Enter exhibition choice.
def hallb(): Exhibition description.
def hall2(): Where to next choice.

def international_pav(): Description of the Pavilion.
def int1(): Pay to eat choice.
def inta(): Where to next description.
def int2(): Where to next choice.

def japan_pav(): Description of the Japan Pavilion.
def jpn1(): Exhibition description.
def jpn2(): Where to next choice.

def jw_pav(): Description of the Johnson Wax Pavilion.
def jw1(): Exhibition description.
def jw2(): Where to next choice.

def jordan_pav(): Description of the Jordan Pavilion.
def jor1(): Where to next choice.

def lebanon_pav(): Description of the Lebanon Pavilion.
def leb1(): Where to next choice.

def louisiana_pav(): Description of the Louisiana Pavilion.
def loua(): Pay to enter choice.
def loub(): Where to next description.
def lou1(): Where to next choice.

def malaysia_pav(): Description of the Malaysia Pavilion.
def mal1(): Where to next choice.

def minnesota_pav(): Description of the Minnesota Pavilion.
def minn1(): Where to next choice.

def missouri_pav(): Description of the Missouri Pavilion.
def miss1(): Where to next choice.

def mor_pav(): Description of the Morocco Pavilion.
def mor1(): Where to next choice.

def nj_pav(): Description of the New Jersey Pavilion.
def nja(): Where to next description.
def nj1(): Where to next choice.

def nyca_pav(): Description of the New York City Pavilion A.
def nyca1(): Where to next choice.

def nycb_pav(): Description of the New York City Pavilion B.
def nycb1(): Where to next choice.

def nysa_pav(): Description of the New York State Pavilion A.
def nysa1(): Where to next choice.

def nysb_pav(): Description of the New York State Pavilion B.
def nysb1(): Exhibition description.
def nysb2(): Where to next choice.

def nysc_pav(): Description of the New York State Pavilion C.
def nysca(): Enter exhibition choice.
def nysc1(): Exhibition description.
def nysc2(): Where to next choice.

def pakistan_pav(): Description of the Pakistan Pavilion.
def pak1(): Where to next choice.

def panam_pav(): Description of the Pan American Highway Gardens.
def pan1(): Where to next choice.

def pepsi_pav(): Description of the Pepsi-Cola Pavilion.
def pepa(): Pay to enter choice.
def pep1(): Exhibition description.
def pep2(): Where to next description.
def pepb(): Where to next choice.

def phil_pav(): Description of the Philippines Republic Pavilion.
def phil1(): Exhibition description.
def phil2(): Where to next choice.

def schaef_pav(): Description of the Schaefer Brewing Pavilion.
def schaef1(): Where to next choice.

def sfs_pav(): Description of the Sermons from Science Pavilion.
def sfs1(): Exhibition description.
def sfs2(): Where to next choice.

def sierra_pav(): Description of the Sierra Leone Pavilion.
def seia(): Pay to enter choice.
def seib(): Exhibition description.
def sei1(): Where to next choice.

def sinclair_pav(): Description of the Sinclair Pavilion.
def sin1(): Exhibition description.
def sin2(): End of game.

def sks_pav(): Description of the SKF Industries Pavilion.

def sweden_pav(): Description of the Sweden Pavilion.
def swed1(): Where to next choice.

def switzerland_pav(): Description of the Switzerland Pavilion.
def switz1(): Where to next choice.

def tol_pav(): Description of the Tower of Light Pavilion.
def tol1(): Where to next choice.

def tat_pav(): Description of the Transportation and Travel Pavilion.
def tat1(): Where to next choice.

def uar_pav(): Description of the United Arab Republic Pavilion.
def uar1(): Where to next choice.

def usr_pav(): Description of the United States Rubber Pavilion.
def usra(): Pay to enter choice.
def usrb(): Exhibition description.
def usr1(): Where to next choice.

def unispherea_pav(): Description of the Unisphere A Pavilion.
def unia1(): Where to next choice.

def unisphereb_pav(): Description of the Unisphere B Pavilion.
def unib1(): Where to next choice.

def vatican_pav(): Description of the Vatican Pavilion.
def vat1(): Where to next choice.

def walters_pav(): Description of the Walter's International Wax Museum.
def walta(): Pay to enter choice.
def waltb(): End of game.

def westinghouse_pav(): Description of the Westinghouse Pavilion.
def west1(): Exhibition description.
def westa(): Where to next description.
def west2(): Where to next choice.

def wisconsin_pav(): Description of the Wisconsin Pavilion.
def wisca(): Enter exhibition choice.
def wisc1(): Exhibition description.
def wisc2(): Where to next choice.

MISC.

def astral_foun(): Description of the Astral Fountain.
def ast1(): Where to next choice.

def fairs_foun(): Description of the Fountain of the Fairs.
def fairs1(): Where to next choice.

def planets_foun(): Description of the Fountain of the Planets.
def plan1(): Where to next choice.

def solar_foun(): Description of the Solar Fountain.
def sol1(): Where to next choice.

def moses(): Description of Robert Moses.

def rocket(): Description of the Rocket Thrower Sculpture.
def rock1(): Where to next choice.

def light(): Description of the light fixtures.

def first(): Description of scene and where to next choice.

def areas(): Description of the areas of the Fair.

def pay(): Money function.

def broke(): End of game.

def length(): Time function.

def incurable(): End of game.

def start(): Start sequence.

def name(): Player is asked to type name.

def intro(): Choice to enter World's Fair.

exit() End of game.