TSA VIDEO GAME DESIGN
Coppell, Texas
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Purpose & Description of the Software

The software, hereby known as “Office Party,” was created for the Video Game Design portion of the Technology Student Association Competition by the Video Game Development team at McKinney Boyd High School. The Development team produced “Office Party” with one premise: to provide a game with convivial, complex and amusing elements that entertain the player(s) while intellectually stimulating the player(s).

The premise of the game parodies a trivial yet common inconvenience. The “Office Party” is commonly bemoaned by workers and managers alike as a nuisance, vexing those involved with the party for hours on end in the best case scenarios and creators of “emboldened strange behaviors” (Jennifer Fowler-Hermes | Labor & Employment Attorney) in the worst case scenarios. Therefore, the main issue can only be absolved in one way and this one way forms the basic premise of the game: escape. This theme is used hyperbolically in order to facilitate a humorous atmosphere throughout gameplay. The game’s main goal centers around this Orphic concept of escape, taking you through fantastic situations with the main goal of escape. Throughout the game, the player will encounter a number of different extreme environments, all of them the player overcoming to achieve that ultimate goal. Further, the player will be tasked with solving a series of puzzles and challenges revolving around said environment.

To summarize, “Office Party” combines whimsical design elements and puzzles to create a quick yet interesting gameplay experience.

Target Audience

"Office Party" boasted the initial design concept of a "fun for all ages family game." The software's substantial use of bright materials and simplistic graphic design appeal to younger audiences, making use of a widely used top-down graphic system to facilitate ease of gameplay and accessibility. However, the game also appeals to parents and other adults alike, "Office Party" repeatedly satirizes a common adult phenomenon (see *Purpose & Description of the Software*). The (often unsubtle) reference to this phenomenon will amuse older audiences. Additionally, the game's collaborative elements encourage cordial interaction between players.

To summarize, "Office Party" targets a family audience, due to its design elements, satirical commentary and collaborative style.

Playing "Office Party"

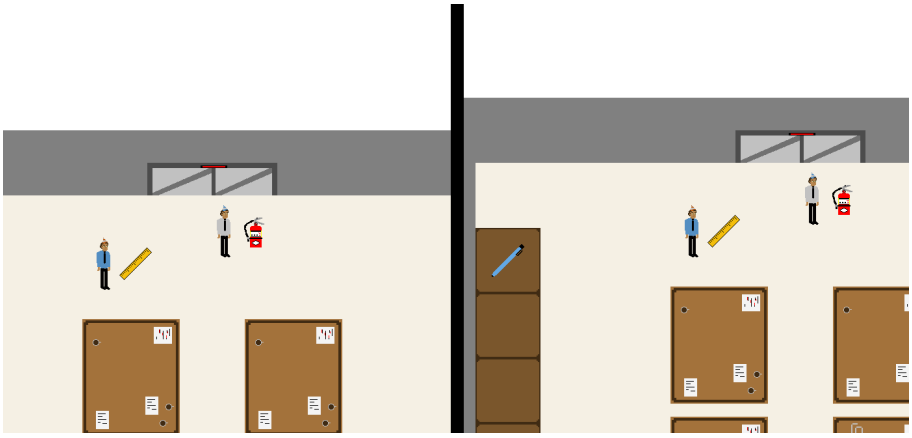
Player 1: AWSD

Player 2: Arrow Keys

1. The Home Screen

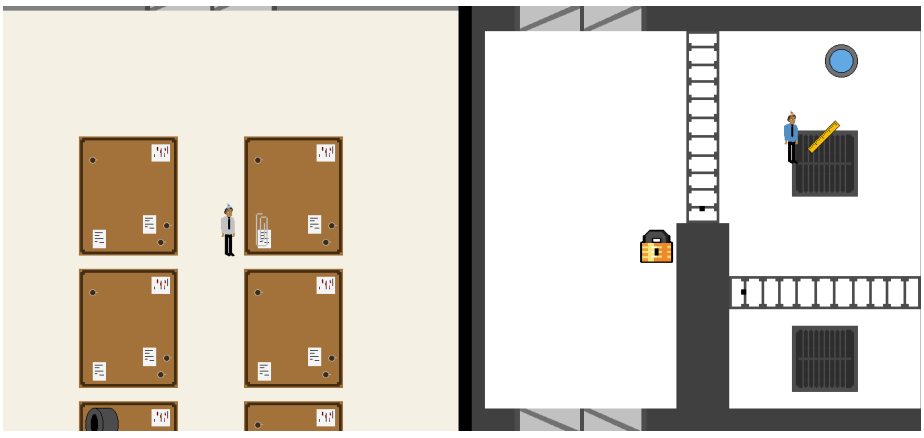
Press the Start Button

2. Starting Level: The Office Lobby



The Office Lobby is the starting level. Throughout the level, there are multiple office utensils that can be used in subsequent levels; Player 1 can press Left Shift to use them, while Player 2 can press Alt to use them. Players 1 and 2 can also use these controls to interact with objects. To drop an item, Player 1 can use Q, while Player 2 can use /.

3. Other Levels



In the following series of levels you will have access to the items you picked up in the Office Level. You must then use those items to solve a variety of puzzles:

In the Prison Level, the players must solve a puzzle in order to advance to the next level. Player 2 must enter a grate which will take them to a blue button that will open the cell that Player 1 is in. Then, using a Paper Clip found in the Office Level, Player 1 can unlock the third cell door via the padlock, allowing both players to advance to the next level via the elevator.

In the Fantasy Level, each player must solve a puzzle in order to give the other player access to the next level. After entering a floating castle via a rainbow, Player 1 will find a chess board. Player 1 can solve their puzzle by moving the white chess pieces to positions that will deliver a checkmate against black. In the same castle, Player 2 will find colored tiles sectioned off by lasers. Player 2 can solve their puzzle by moving each tile to its corresponding square in the rightmost column of the grid. The gray tile will have to be colored blue using a Pen found in the Office Level. Furthermore, the lasers can be controlled by an orange button found in the level. Once both players have completed their respective puzzles in the Fantasy Level, they will be able to advance to the Lobby Level via the elevator, marking the completion of the game.

Self Evaluation

Documentation: 38/40

- Outstanding organization skills are evident in the preparation of the portfolio. The portfolio has well designed sections and flows from one section to the next logically. Additionally, the portfolio contains all components required by the rubric.

- The game directions can be followed, but at times they do not sync with overall workings of the game; most control functions are adequate. All game functions are showcased but the “how-to” does not translate as well on other devices.
- The Plan of Work log is complete and shows participation of all members; self-evaluation is expressive and specific. The log was obviously updated throughout the process and contains specific and detailed information about the creation of the game.

Game Design: 36/40

- The game showcases large amounts of creativity and contains evidence of home made art and map design. However design does not blend as strongly as is required for a perfect score in the category.
- The game is very original and shows evidence of advanced programming skills throughout including a knowledge of shifting scenes and perspectives.
- The game is well-organized and flows smoothly from one scene/ level to the next. The game has clearly defined levels and stages of play throughout.
- The game is interesting, easy to follow and enjoyable to play. Most design concepts are implemented and it captures the spirit of puzzles and party games.

Bonus Points: 9/15

- The game is very good and unique but lacks the design qualities necessary to be an exemplary game.

Total: 83/95

To summarize, the game Office Party shows obvious creativity, ingenuity and programming skill and the portfolio is very well organized and detailed. Additionally, the game shows attention to detail but does not quite meet the design standard of an exemplary game. With all of that said the game is fun to play, captures the attention of the player and contains the spirit of a party game: collaboration and whimsy.

Hardware & Software Used

2017 MacBook Air
Vohra, D. (n.d.). Java EE development with Eclipse. computer software.
Java Language
Piskel
Pixel Art
Canva

Progress Log

Week	Johnson, M.	Mehta, P.	Williams, I.
September13 September 20	● Matthew began work on coding the agreed upon top-down style game. ● Agreed to use Unity as his coding software.	Parth showed options for asset styles (items, backgrounds, etc.)	Isaiah brainstormed basic story elements.
September 20 September 27	● Matthew continued coding the basic structure of the game and generated a list of required assets.	● Parth generated assets based on the demands of the story element. ● The starting assets included:	Isaiah (with the counsel of the other members) drafted the basic idea for the game as well as the title: Office Party.
September 27 October 4	● Matthew created a template for level designs with the following requirements ○ Map Style ○ Layout ○ Puzzle ○ Assets	● Parth, using the art software Pixel Art, generated images of basic office supplies to be used throughout the game.	● Isaiah and the other team members began to fill out the level design forms with story elements, environment ideas and puzzle ideas: ○ Regular ○ Fiery ○ Jungle ○ Fantasy ○ Arctic ○ Desert ○ Ocean ○ Jail

			○ Space Station ○ Maze
October 4 October 11	● Matthew continued coding and produced a “skeleton design” for the game. Coded features included: ○ Horizontal and Vertical movement ○ Split Screen	● Parth generated the map structures and layout for the game. ● Parth began the process of ensuring maps and assets were the correct size.	● Isaiah began working on writing the basic framework for the puzzles ○ Fire Puzzle was completed and submitted
October 11 October 18	● Matthew specified the components of required puzzles ○ Made sure that puzzles were possible to code and design within the time limit ● Matthew also began to help with writing puzzles	● Brainstormed possible assets for levels and assisted with the design of levels and puzzles. ○ Fire Extinguisher ○ Vines ○ Magic Gel Pen ○ Canister/ Thermos ○ Paper Clip ○ Duct Tape	● Brainstormed possible uses for generated assets ○ Using a fire extinguisher to extinguish fires in a level ○ Climbing vines in a level ○ Using duct tape for fixing the environment in a level
October 18 October 25	● Matthew continued coding and worked out bugs across the “skeleton design”	● Parth continued generating assets and sprites	● Isaiah answered question about possible puzzles
October 25 November 1	● Matthew continued coding and worked out bugs across the “skeleton design”	● Parth continued generating assets and sprites	● Isaiah began writing the Design Portfolio
November 1	● Decided that	● Parth	● Isaiah looked

November 8	levels would not have to be the same size ● Continued work on creating a moving camera for both perspectives	generated complete assets for the space level to be imported as a test to see if the skeleton structure worked.	over the space level and assisted with solving any problems that arose.
November 8 November 15	● Matthew implemented assets in the space level to test the viability of the structure blended with assets.	● Parth edited the space level to respond to problems that arose from implementing the space assets.	● Isaiah continued work on the video game design portfolio and organized a checklist for portfolio elements
November 15 November 22	● Matthew continued coding and working out design bugs in the code	● Parth continued generating assets and sprites	● Isaiah continued creating puzzles for the levels with less work done
November 22 November 29	● Matthew continued coding and working out design bugs	● Parth was out of town for Thanksgiving Break	● Isaiah was out of town for Thanksgiving Break
November 29 December 6	● Matthew imported finished levels in a similar process to the space level	● Parth finished sizing out multiple levels ○ Fire Level ○ Fantasy Level ○ Jail Level	● Isaiah edited puzzles in response to bugs in implemented levels.
December 6 December 13	● Matthew continued coding and working out design bugs in	● Parth began the process of sizing the levels not yet	● Isaiah resumed work on the design portfolio

	implemented levels	implemented	
December 13 December 20	• Matthew continued coding and working out design bugs in implemented levels	• Parth began the process of sizing the levels not yet implemented	• Isaiah finished proper formatting and layout of the portfolio
December 20 December 27	• Matthew was out of town for Christmas Break	• Parth was out of town for Christmas Break	• Isaiah was out of town for Christmas Break
December 27 January 3	• Matthew continued coding over Christmas break to respond to a sudden found bug	• Parth was out of town for Christmas Break	• Isaiah was out of town for Christmas Break
January 3 January 10	• Matthew began to prioritize levels to fit within the three minute time limit	• Parth generate more sprites for prioritized levels	• Isaiah completed the target audience statement for the portfolio
January 10 January 17	• Matthew began to prioritize levels to fit within the three minute time limit • Matthew also created a tagline for the game	• Parth generate more sprites for prioritized levels	• Isaiah generated the logo for the game and continued work on the portfolio.
January 17 January 24	• Matthew continued working out bugs and readying the game for submission	• Parth continued generating sprites	• Isaiah continued writing the portfolio and making sure the game fit within rubric specifics

January 24 January 31	• Matthew finished prioritized levels and readied the game for submission	• Parth generated every asset for prioritized levels and readied the game for submission	• Isaiah finished the portfolio and readied it for submission

Student Copyright Checklist

(for students to complete and advisors to verify)

1) Does your solution to the competitive event integrate any music? YES NO

If NO, go to question 2.

If YES, is the music copyrighted? YES NO

If YES, move to question 1A. If NO, move to question 1B.

1A) Have you asked for author permission to use the music in your solution and included that permission(letter/form) in your documentation? If YES, move to question 2. If NO, ask for permission (OR use royalty free/your own original music) and if permission is granted, include the permission in your documentation.

1B) Is the music royalty free, or did you create the music yourself? If YES, cite the royalty free music OR your original music properly in your documentation.

CHAPTER ADVISOR: Sign below if your student has integrated any music into his/her competitive event solution.

I, _____Grahame Rance__ (chapter advisor), have checked my student's solution and confirm that the use of music is done so with proper permission and is cited correctly in the student's documentation.

2) Does your solution to the competitive event integrate any graphics? YES NO

If NO, go to question 3.

If YES, is the graphic copyrighted, registered and/or trademarked? YES NO

If YES, move to question 2A. If NO, move to question 2B.

2A) Have you asked for author permission to use the graphic in your solution and included that permission (letter/form) in your documentation? If YES, move to question 3. If NO, ask for permission (OR use royalty free/your own original graphic) and if permission is granted, include the permission in your documentation.

2B) Is the graphic royalty free, or did you create your own graphic? If YES, cite the royalty free graphic OR your own original graphic properly in your documentation.

CHAPTER ADVISOR: Sign below if your student has integrated any graphics into his/her competitive event solution.

I, _____Grahame Rance_____ (chapter advisor), have checked my student's solution and confirm that the use of graphics is done so with proper permission and is cited correctly in the student's documentation.

3) Does your solution to the competitive event use another's thoughts or research? YES NO

If NO, this is the end of the checklist.

If YES, have you properly cited other's thoughts or research in your documentation? If YES, this is the end of the checklist.

If NO, properly cite the thoughts/research of others in your documentation.

CHAPTER ADVISOR: Sign below if your student has integrated any thoughts/research of others into his/her competitive event solution.

I, ____Grahame Rance_____ (chapter advisor), have checked my student's solution and confirm that the use of the thoughts/research of others is done so with proper permission and is cited correctly in the student's documentation.

L·E·A·P
Leadership. Education. Achievement. Personal Growth.

LEAP Report – Competition Engagement (HS)
Competitive Event Leadership Experiences

Video Game Design
Competitive Event

838454 838455 838456
Participant/Team ID#

The Student Leadership Challenge*		Leadership Experiences
Practices	**Behaviors**	
☐ Model the Way	Follow through on promises and commitments	Throughout the process of TSA Video Game Design, the McKinney Boyd team set a series of deadlines and commitments. The process taught the team not only how to keep commitments but also how to respond to the inability to make certain deadlines. On many occasions the team through communication was able to extend deadlines and work around problems. Throughout the design process every team member set an example for modeling the way. Matthew Johnson through tireless work programmed the game and worked out countless bugs, displaying incredible perseverance. Parth Mehta provided invaluable oversight and advice as well as insight to the process of asset design. Isaiah Williams gave feedback and questions from the perspective of a non-programmer, making sure the team could communicate in a succinct way.
	Set a personal example through actions	
	Align others with principles and standards	
	Seek feedback about impact of actions	
	Make sure teammates support common values	
	Talk about values and principles	
☐ Inspire a Shared Vision	Look ahead and communicate future ideas	The McKinney Boyd team aligned their goals early, the McKinney Boyd team wanted to create a simple but dynamic work product that could compete in the Video Game Design Competition. Additionally, the team agreed to attend weekly meetings to discuss progress leading to enhanced accountability among the members and true feeling of progress during development. The team's response to setbacks like bugs and scheduling issues was rife with optimism. When the team encountered an early bug where one perspective could not move in the horizontal direction, the team responded by working the problem together and fixing the motility issue. Finally, all of the members used their skillsets to reach a common goal. Matthew Johnson and Parth Mehta, the stronger and more experienced programmers used their time to generate the game, whereas Isaiah Williams worked more on the softer elements of the game: story and organization.This shows a devotion to using everyone's talents for production.
	Describe ideal capabilities	
	Talk about how future could be improved	
	Be upbeat and positive	
	Communicate purpose and meaning	
	Show others how their interests can be realized	
☐ Challenge the Process	Challenge current skills and abilities	The design process presented challenges to every member of the team that had to be overcome. Matthew Johnson had to learn the top-down style of game creation which differed significantly from his style from previous games. Regardless, Matthew's experiments with his top-down style games and programmed a well rounded product. Parth Mehta furthered his ability to blend assets with code, producing work that took advantage of detailed, well rendered models. Parth Mehta also taught the team steps to engineering design: 1) Define the problem 2) Ask questions 3) Imagine Solutions 4) Plan Prototype 5) Make Prototype 6) Test Prototype 7) Improve Prototype. Finally, Isaiah Williams did not have any background whatsoever in programming, but through questioning the process developed an understanding of the various developments in the game. Of course, Isaiah still has a lot to learn. The design process had every member constantly asking what they could do better.
	Break projects into smaller do-able portions	
	Search for innovative ways to improve	
	Ask "What can we learn?"	
	Take initiative in experimenting	
	Help others try out new ideas	
☐ Enable Others to Act	Foster cooperative relationships with others	Throughout the creation of Office Party, the McKinney Boyd team did their best to make sure the environment was always friendly and conducive to wacky ideas. This team always made sure to listen to every idea stated. For instance, if one team member wanted to pursue an idea where the player would have to ride flying unicorns across a rainbow bridge, we would put that through our Idea Viability Process: What do we like about the idea? The team always made sure to start with the good of an idea establishing what worked. What doesn't quite work? The team made sure to keep a friendly and uplifting tone during this step so that the team could establish what would have to be taken out. How do we reconcile both? This question posited solutions made up of answers to the questions above. The process ensured compromise and the free flow of ideas throughout the video game design process.
	Actively listen to diverse viewpoints	
	Treat others with respect	
	Support the decisions other people make	
	Give people freedom and choice	
	Provide leadership opportunities for others	
☐ Encourage the Heart	Praise people	Every member of the team constantly encouraged each other and celebrated the hard work performed by all members of the team. Matthew Johnson's quiet yet effective praises for good work were sprinkled throughout the process. Parth Mehta's not so quiet recognitions were greatly appreciated by team members. Isaiah Williams' epithets prompted laughter and cringes from all team members throughout the process. Additionally, after the design process had mostly finished the team created small titles for each other based on the hard work each person had performed throughout the designing of the game. Finally, the entire team acknowledged and appreciated the limits of real life, making sure to accommodate tests, competitions and other life related obstructions.
	Encourage others	
	Express appreciation for people's contributions	
	Publicly recognize alignment with values	
	Celebrate accomplishments	
	Creatively recognize people's contributions	

L·E·A·P
Leadership, Education, Achievement, Personal Growth

LEAP Report – Competition Engagement (HS)
General Leadership Experiences

Video Game Design
Competitive Event

Participant/Team ID#

Leadership Categories	Leadership Experiences
☐ Leadership Roles	Matthew Johnson: McKinney Boyd TSA Vice President, McKinney Boyd Video Game Design Lead Programmer, McKinney Boyd UIL Computer Science Captain Parth Mehta: McKinney Boyd TSA Video Game Design Lead Assets Designer Isaiah Williams: McKinney Boyd President of Youth & Government, TSA Video Game Design Documentarian, McKinney Boyd UIL Current Events Captain, Youth 4 Beto Organizing Executive, Matthew's leadership roles denote his programming skill and ability to create polished work. Parth's leadership roles denote his ability and experience in creating dynamic works, displaying his incredible creativity. Isaiah's leadership experience deals mostly with organizing clubs and oversight, allowing him to organize the process of video game design.
☐ Community Service/ Volunteer Experiences	Mathew Johnson: Prepared meals for feed the city, Block Walks for Beto For Texas Parth Mehta: Wrote Christmas letters to the retirement homes, Helped McKinney Boyd Teachers with setting up classrooms Isaiah Williams: Local Political Campaigns and Advocacy Groups (Beto For Texas, Sandeep Srivastava for Congress), Local Church Projects (St. Peters Daycare and St. Peters Food Pantry), Helping McKinney Boyd Teachers with setting up classrooms All three team members have experience organizing and carrying out volunteer events across multiple different organizations.
☐ Leadership Development	Throughout the design process our leadership skills have developed in two ways: learning to prioritize and learning how to delegate responsibility to the people who can do the task the best. While developing the game we had to learn that we would be unable to complete the game to our highest ambitions and that cuts would have to be made in order to preserve the quality of he game and the mental health of the game designers. This taught us that we have to be able to prioritize what we need over our wildest dreams. Additionally, during development, each member of the team had to be given roles. The role of programmer went to the strongest coder as opposed to those of us wih no previous experience in coding or programming. This taught us that no matter what your skills are you should be able to participate in the process of TSA and in any porject that you truly care about.
☐ College Career Planning	Matthew Johnson wants to enroll at a series of schools including Univeristy of Texas and MIT to build his programming skills and become a stronger computer scientist. Parth Mehta currently wants to enroll at the California Technology Institue to study computer science so that he can build a programming career. Isaiah Williams is currently planning to apply to a series of schools to study international economics in order to satisfy a passion for liberal arts and qunatitative statistics. Additionally, he plans to apply to law school and pass the bar exam. This competition has helped them with organization and writing so that they can better apply to colleges and organize his school work.

The Student Leadership Challenge* Practices and Behaviors	
Model the Way	Follow through on promises and commitments
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	Align others with principles and standards
	Seek feedback about impact of actions
	Make sure teammates support common values
	Talk about values and principles
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	Describe ideal capabilities
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Challenge the Process	Challenge current skills and abilities
	Break projects into smaller do-able portions
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Enable Others to Act	Foster cooperative relationships with others
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	Treat others with respect
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	Give people freedom and choice
	Provide leadership opportunities for others
Encourage the Heart	Praise people
	Encourage others
	Express appreciation for people's contributions
	Publicly recognize alignment with values
	Celebrate accomplishments
	Creatively recognize people's contributions