German University in Cairo
Media Engineering and Technology
DMET 502 Computer Graphics, Winter 2024

## **Project proposal template**

## Project Title (Game name): Ghost Asylum

- 1. Game description:
  - 1. In Ghost Aslym, players navigate through a dark, haunted mansion filled with ghosts and traps as they try to collect keys to unlock the final exit. The game consists of two levels, each with increasing difficulty and unique, spooky atmospheres. In Level 1, players explore frightening hallways with flickering lights, avoiding simple obstacles like rolling barrels and ghostly appearances. Level 2 takes them to the mansion's cellar, where they encounter moving obstacles and aggressive ghost animations. Players can switch between first-person and third-person perspectives to enhance the immersive experience and strategic visibility. Scoring is based on collected items, time taken to escape, and successful obstacle avoidance.
- 2. Main character model(s):
  - a. Explorer: A mysterious figure dressed in explorer attire, with basic animation for walking, running.
  - b. Ghosts: Transparent, animated ghosts with different behaviors, appearing and disappearing at intervals, and will be in level 2.
  - c. Zombie: Opaque or semi-transparent, should move slower compared to ghosts, appear and disappear at random intervals, and will be in level 1
- 3. First environment models (obstacles, collectibles, target): All models are textured
- 1. Rolling barrels Obstacles that move down hallways, textured to look old and worn.
- 2. Exit Door The final door that players unlock once they collect enough keys.
- 3. Keys Collectibles that players need to gather to unlock the exit door.
- 4. Zombie when the player collides with the zombie, his health reduces.
- 5. Old furniture Textured objects that enhance the haunted hallway ambiance.
- 4. Second environment models (obstacles, collectibles, target): All models are
- 1. Moving chains and swinging axes Animated obstacles players must avoid, textured to look rusty and aged.
- 2.Potions Collectible items that grant bonuses, adding to the score when collected.
- 3. Ghosts scares the player and delays his motion
- 4. Trapdoors Additional obstacles that open and close randomly.
- 5. A first person shooter point of view will be implemented. The camera is the player's eye.
- 6. A third person shooter point of view will be implemented. The camera is behind and slightly above the player (the upper part of the player is visible to the camera).

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- 7. Navigation through the game is done using the keyboard and the mouse:
- 1. The keyboard keys are used to move the player
- 2. The mouse buttons will alternate between camera views.
- 8. The score is displayed on the screen.
- 9. Generation of animations with every user interaction will be implemented:
- 1. Collecting keys or potions Plays a glowing animation on the item
- 2. Encountering a ghost will result in ghost sound effect.
- 3. Dodging obstacles change the player's color to a vibrant colour(still didn't decide which colour)
- 4. Unlocking door will use a sound indicator
- 5. Getting attacked by zombie- will result in a sound indicator (someone is screaming)
- 6. Rolling Barrels will use a sound indicator (something is falling)
- 7. Trapdoors will rotate around one edge (swinging open like a hinged door)
- 10. There is a light source that changes its color intensity and a light source moving in the scene:
- 1. At level 1: the light effect will be a point light source, gradually changes it's intensity, and light animation will be rotation through the level
- 2. At level 2: the light effect will be flickering to add tension in this level and the light intensity decreases by time, and for the light animation it will be moving dynamically (translation)