German University in Cairo
Media Engineering and Technology
DMET 502 Computer Graphics, Winter 2025

Project Proposal Template

(Please replace the text in red by your own ideas)

Project Title (Game Name): Candy Land: Sugar Rush

1. Game description (detailed):

Kid-themed racing game where you try to reach the goal (finish line) within a specified time limit. There will be power ups that will assist the player in reaching the finish line quickly and collectibles that increase the player's score. If the player fails to reach the game goal in time, they lose. There will be two different levels with different objects, different obstacles, different goal, etc…

2. First environment models (obstacles, collectibles, target): All models are textured. Specify what models to be used (human, car, tank, coins, … etc)

1- The power ups will be cake which will speed up the car
2- Main character is a red car
3- The collectibles will be gummy bears which will increase the game score 3- The obstacles will be ice cream vending carts which will stop the car on collision
4-The game target will be the finish line

3. Second environment models (obstacles, collectibles, target): All models are textured. Specify what models to be used (human, car, tank, coins, … etc)

1- **The power ups will be cake pops which will give the car a shield to protect it from the next obstacle or until it runs out after some time, whichever happens first**
2- **Main character in the second environment will be a blue car**
3- **the game target will be the red car from the first environment**

4- **The collectibles will be candy cane which will increase the game score**
5- **The obstacles will be gumball machines which will stop the car on collision**

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4. A first person point of view will be implemented. The camera is the player's eye.
5. A third person 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).

6. Navigation through the game is done using the keyboard and the mouse: **1- The keyboard keys are used to move the player (which is a car model) 2- The mouse buttons will make the player alternate between camera views.**
7. The score is displayed on the screen.

8. Generation of animations with every user interaction will be implemented:

1- **There will be a sound effect upon picking up any collectible or power up**
2- **There will be a sound effect upon collision with an obstacle**
3- **Power ups, collectibles, and obstacles will be hovering in place bobbing up and down and/or rotating**
4- **At the start the car makes a loud engine sound and as it drives it makes a light engine sound**
5- **when the car hits an obstacle the camera shakes briefly**
6- **when you collide a power up or a collectible it will disappear**

7- **when you pass the game target in the first environment it bounces**

8- **when you reach the car in the second game target in the second environment it rotates**

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9. There is a light source that changes its color intensity and animates:

1- **For example: the sun (daylight) is the light source and its intensity changes from white to darker intensity representing the night.**

2- **As the game progresses the sky gets darker. After some time, the car's headlights turn on , the headlights are togglable as the car is moving (moving light source)**

3- **Traffic light at the starting line which acts as a "count down" for the race**