

Habib University



Dhanani School of Science and Engineering

Object Oriented Programming and Design Methodologies CS/CE 224/272

Project Proposal

BINary kings

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Project Overview:

Game Concept:

- Genre: 2D platformer
- Multiplayer: 2-player CO-OP
- Objective:
 - Avoid the Catcher
 - Collect collectables (papers, coins, powerups)
 - Escape the place
- Inspiration: Fireboy and Watergirl & Bob the Robber

Gameplay:

- The game will be played by two players controlling their two respective characters using arrow and WASD keys. Players will be able to move left, right, up and down if it is a valid move and can move through multiple floors.
- Players will have to work together to solve puzzles, avoid traps and manoeuvre around the catcher.
- Players will have to collect collectables to be able to win the game or to unlock new abilities.
- Players must avoid the catcher, who will try to catch them and end the game.

Win Condition:

- Players escape the house and reach the exit.

Loss Condition:

- The catcher catches any one of the players.
- Any one of the players gets caught in a trap.

Other Features:

- The game will feature multiple floors.
- The game will feature 3 levels, which players can explore and navigate.
- The game features a variety of collectables for players to collect.
- The catcher will be trying to reach the player nearest to it automatically through the Dijkstra algorithm.
- The game will also include background sounds to make it more interesting.
- The game will include multiple animations which includes but is not limited to the movement of the players, catcher, few background objects to make the whole game feel more lively.



Fig 1. Bob the Robber



Fig 2. Fireboy and Watergirl

Story:

Two students, Ibad and Bilal, after having done horribly in their midterms, devise a cunning plan to infiltrate the HU campus to alter their answer sheets on a Saturday night. However, to their dismay, one of their instructors, Professor UN, decided to stay late. And he is renowned for his anger towards students, especially when they are doing something naughty. To their advantage though, his eyesight is not as visually powerful during the night, meaning he can only identify them once he comes in contact with them.

They each have to change 5 of their papers, which are stored in different locations around the campus. Due to the sheer complexity of HU's security system, there are a set of puzzles that require cooperation in order to complete their mission impossible. If one of them is caught, Professor UN immediately raises an alarm and the pair is busted. Game Over.

UML Diagram:

