

Group Members :

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Project : Mini-Mario game development**Motivation:**

Entertainment is one of the most important things to live a joyful life. Playing games is one of the very good ways to have fun. Because of security purposes many parents don't allow their child to go out and there are some people who are physically unable to play. In this age of science, video games are the important form of entertainment. Some gamers play games on their device at home. But there are some kids who can't play because they don't understand the playing process or don't have enough hardware space to play a large game. Mini-Mario will be a solution for them because this game can entertain them and it takes less space and is easy to play.

Objective:

The main objective of this project is to develop a small game named mini Mario.

Critical Challenges:

It is very much difficult to develop a game because it's a combination of (art, music & programming).

How Ps are addressed through the project and mapping among Ps, COs and POs:

Ps	Attribute	How Ps are addressed through the project
P1	Depth of Knowledge Requirement	<ul style="list-style-type: none"> - The project requires study of research on related games and other documentations (K8). <ol style="list-style-type: none"> 1. https://www.researchgate.net/publication/342331211_The_MiniMario_Video_Game 2. http://iwataasks.nintendo.com/interviews/#/wii/super_mario_galaxy/0/2 3. https://www.pygame.org/docs/ref/display.html - data collection from different gaming blogs (K7). <ol style="list-style-type: none"> 1. https://www.gamasutra.com/blogs/BriceMorrison/20110119/88794/Why_Super_Mario_Bros_Was_So_Successful.php 2. https://www.themariobros.net/page/7 - knowledge of game development engineering (K3) e.g. in python need pygame

P2	Wide ranging	Using this idea we can add some more level and features to it.
P3	No obvious solution	<p>Different developers can develop a game using different languages and different interfaces. So there is no obvious solution for this game. This types of game developed in java e.g. Fluppy Bird (https://phoneky.com/games/?id=j4j71753)</p> <p>In our project we develop our game in python. We use 'pygame' module to develop the game.</p>

P5	Extent of applicable codes	Generate proper games with extra features and interface.
P6	Diverse groups	Our game will be used by gamers and by the developers. Gamers will use this game and the developers will update the game regularly.
P7	Interdependence	Creating Model (algorithmic part), Classify different levels.

Addressing Complex Activities (As) through the project :

As	Attribute	How As are addressed through the project
A1	Range of Resources	In the development stage, the project requires the use of diverse resources including different types of material (image), music, pygame interface, django. For developing the whole game there are three developer's contribution. Developers are : Ayesha Jahan, Rakin Mohammad Sifullah, Yasir Iqbal Mredul.
A2	Level of interaction	A good level interaction between game developer and player.
A4	Consequences for society and the environment	By developing this game Mini-Marco game it will help kids and gamers to find a new way of entertainment. Kids are not concerned about the environment so when they play on the playground sometimes they create harm to the environment. As like for a playground they cut trees, through their toys here and there. So online games save the environment.
A5	Familiarity	The project deals with a pygame based game for gamers.

CO-PO mapping for this project :

CO No.	CO(Project) Statements: Upon successful completion of the project:	Corresponding POs (Appendix-1)
CO1	Can develop an easy game	Design/ development of solutions
CO2	Investigation of related works and study related documentation	Investigation
CO3	Use a modern/popular IDE (Python language based)	Modern Tool Usage
CO4	Understand the concept of professional ethics,and challenges for developing a game.game.	The Engineer and Society
CO5	Maintain distributed and collaborative software development.	Environment and Sustainability
CO6	Understand the concept of professional ethics.	Ethics
C07	Software maintenance Learn how to work in a group.	Individual and Team work
C08	Learn how to communicate with people from different fields.	Communication
C09	Learn to develop a project, it's management process and its budget estimation.	Project Management and Finance
C010	Learn how to develop a game and deal with	Lifelong learning

	new challenges.	
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Appendix-1:

Washington Accord Program Outcomes (PO) for engineering programs:

No	PO	Differentiating Characteristic
1	Engineering Knowledge	Breadth and depth of education and type of knowledge, both theoretical and practical.
2	Problem Analysis	Complexity of analysis
3	Design/development of solutions	Breadth and uniqueness of engineering problems i.e. the extent to which problems are original and to which solutions have previously been identified or codified.
4	Investigation	Breadth and depth of investigation and experimentation
5	Modern Tool Usage	Level of understanding of the appropriateness of the tool
6	The Engineer and Society	Level of knowledge and responsibility
7	Environment and Sustainability	Type of solutions.
8	Ethics	Understanding and level of practice
9	Individual and Team work	Role in and diversity of team
10	Communication	Level of communication according to type of activities performed
11	Project	Level of management required for differing types of activity

	Management and Finance	
12	Lifelong learning	Preparation for and depth of Continuing learning.