| **Project Design Document** | | *04/*  Programming Theory Project | | --- | |
| --- | --- | --- |

| **Project Concept** | | | |
| --- | --- | --- | --- |
| **1** **Player Control** |  | You control a   | *Player* | | --- | | in this   | *top Down* | game | | --- | --- | |
|  | where   | *WASD* | | --- | | makes the player   | *Move* | | --- | |

| **2** **Basic**  **Gameplay** |  | During the game,   | *Enemies appear* | appear | | --- | --- | | from   | *Randomly or in selected areas of room* | | | --- | --- | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | and the goal of the game is to   | *Defeat all enemies to advance to next level* | | --- | | |

| **3** **Sound**  **& Effects** |  | There will be sound effects   | *When player swings door*  *When player gets hurt*  *When player attack enemies* | | | --- | --- | | and particle effects   | *Player turns red* | | | --- | --- | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | [*optional*] There will also be   | *Enemis will puff when killed* | | | --- | --- | | |

| **4** **Gameplay**  **Mechanics** |  | As the game progresses,   | *Player advances to next room/level with more enemies* | | | --- | --- | | making it   | *More difficult to clear room* | | | --- | --- | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | [*optional*] There will also be   | *Different types of enemies with different types of attack* | | | --- | --- | | |

| **5** **User**  **Interface** |  | The   | *Health Bar* | | --- | | will   | *decrease* | | --- | | whenever   | *Enemie attacks player* | | | --- | --- | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | At the start of the game, the title   | *Hero man* | will appear | | --- | --- | | | and the game will end when   | *Player’s health is zero* | | | --- | --- | |

| **6** **Other Features** |  | | *Maybe player will have the ability to activate a shield for a brief second* | | | --- | --- | | |
| --- | --- | --- | --- | --- | --- |

# **Project Timeline**

| **Milestone** | **Description** | **Due April** |
| --- | --- | --- |
| **#1** | | *Basic Room for testing as well as things ready for level 1* | | --- | | | *7* | | --- | |
| **#2** | | *Basic player movement, attack and enemy implementaion* | | --- | | | *12* | | --- | |
| **#3** | | *Basic level 1 creation* | | --- | | | *15* | | --- | |
| **#4** | | * *More Enemies creation/abilities* | | --- | | | *18* | | --- | |
| **#5** | | * *More Level (3 total?) Optimization if more time* | | --- | | | *20* | | --- | |
| **Backlog** | | * *Feature on backlog - not a part of the minimum viable product* * *Feature on backlog - not a part of the minimum viable product* * *Feature on backlog - not a part of the minimum viable product* | | --- | | | *mm/dd* | | --- | |

# **Project Sketch**



Extra:

Inheritance:

Enemy -> normal enemy / shooter / exploder / faster

Polymorphism:

Enemies mmight have different types of attacks/speeds/movements

Encapsulation:

Check certain data is not modifiable (not all classes can do attack move

Abstraction:

Ake code easier to read