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| Project Design Document | |  | | --- | | *09/08/2024*  Xiaoyu Ma | |

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| Project Concept | | | |
| 1 **Player Control** |  | You control a   |  | | --- | | *Keyboard* | | in this   |  |  | | --- | --- | | *side view* | game | |
|  | where   |  | | --- | | *“ws” keys* | | makes the player   |  | | --- | | *Rotate up and down* | |

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| 2 **Basic**  **Gameplay** |  | During the game,   |  |  | | --- | --- | | *A plane fly forward* | appear | | from   |  | | --- | | *The center of the screen flying from left to right* | |
|  | and the goal of the game is to   |  | | --- | | *Fly through from left to right without collide with any obstacles* | | |

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| 3 **Sound**  **& Effects** |  | There will be sound effects   |  | | --- | | *Sound effects when you fly through the gap between blockers* | | and particle effects   |  | | --- | | *The plane stuck when it hits the wall* | |
|  | [*optional*] There will also be   |  | | --- | | *Sound effects when propeller starts to rotate* | | |

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| 4 **Gameplay**  **Mechanics** |  | As the game progresses,   |  | | --- | | *More obstacles(walls) with different shapes appear* | | making it   |  | | --- | | *Difficult to avoid all obstacles* | |
|  | [*optional*] There will also be   |  | | --- | | *The speed of plane may be accelerated or changed randomly, and we can create coins to make plane more difficult to drive to get them* | | |

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| 5 **User**  **Interface** |  | The   |  | | --- | | *score* | | will   |  | | --- | | *increase* | | whenever   |  | | --- | | *The plane fly through more obstacles* | |
|  | At the start of the game, the title   |  |  | | --- | --- | | *Plane piloting* | will appear | | | and the game will end when   |  | | --- | | *Plane hits the obstacles three times* | |

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| 6 **Other Features** |  | |  | | --- | | *Player can choose different type of planes before starting the games. And there may be bonus points when the plane fly through ten obstacles continuously.* | |

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# Project Timeline

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| --- | --- | --- |
| Milestone | Description | Due |
| **#1** | |  | | --- | | * *Project/Camera set up with primitive objects for all gameplay objects (planes, obstacles and coins)* | | |  | | --- | | *10/01* | |
| **#2** | |  | | --- | | * *Players can move forwards and rotate the direction arbitrarily; the change of speed when the difficulty is higher is set up* | | |  | | --- | | *10/08* | |
| **#3** | |  | | --- | | * *All obstacles with different shapes are set up at their fixed positions* * *When plane hits the obstacles, the player lost a chance, and there are three chances in total* | | |  | | --- | | *10/15* | |
| **#4** | |  | | --- | | * *Coins are created and fixed to the positions* * *Bonus points mechanism where each ten continuous successful obstacles avoiding will plus five scores* | | |  | | --- | | *10/22* | |
| **#5** | |  | | --- | | * *Sound and particle effects implemented* * *Different type of planes implemented* | | |  | | --- | | *10/29* | |
| **Backlog** | |  | | --- | | * *Records of the highest scores kept for each player* | | |  | | --- | | *11/04* | |

# Project Sketch

A diagram of a diagram

Description automatically generated