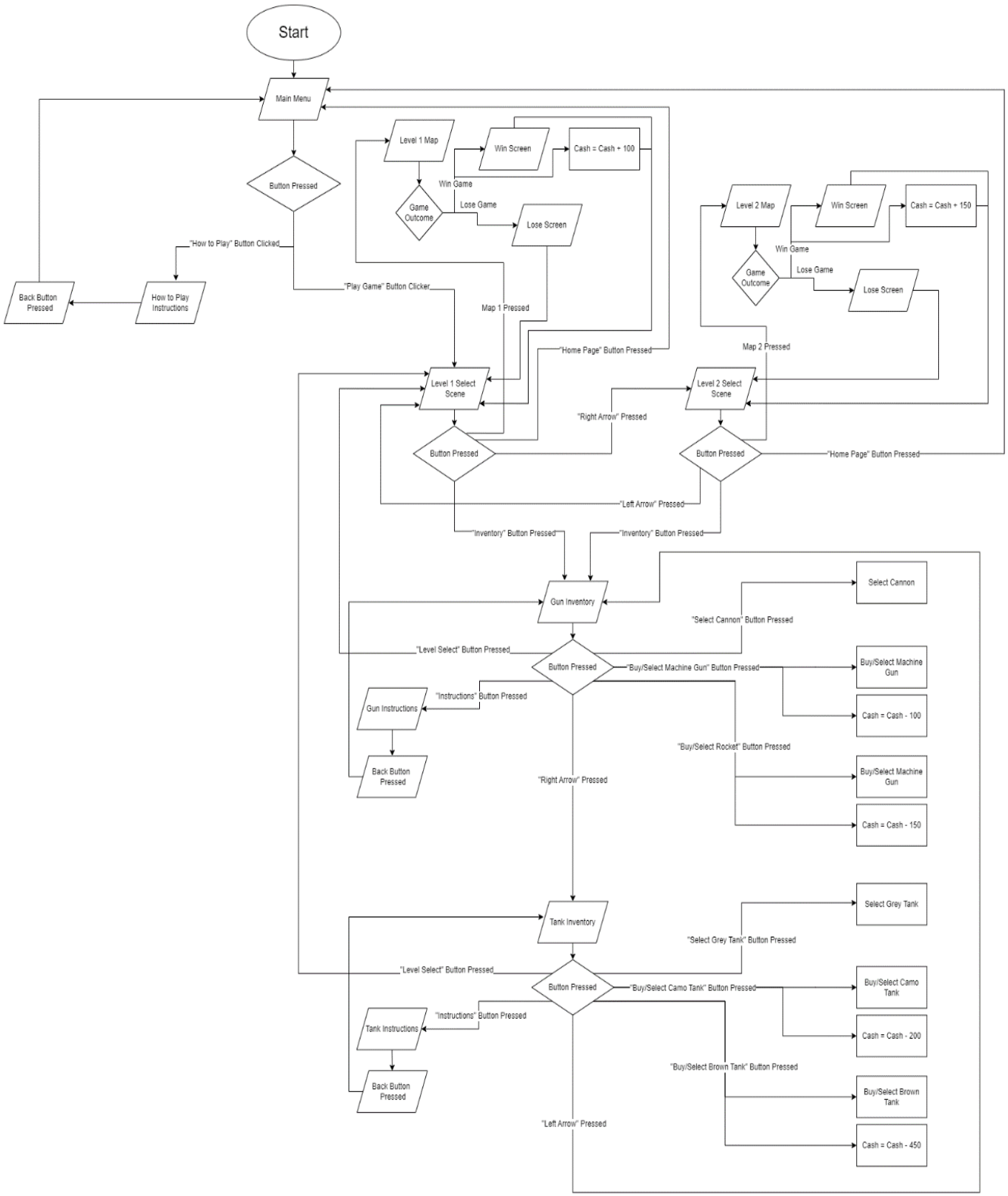
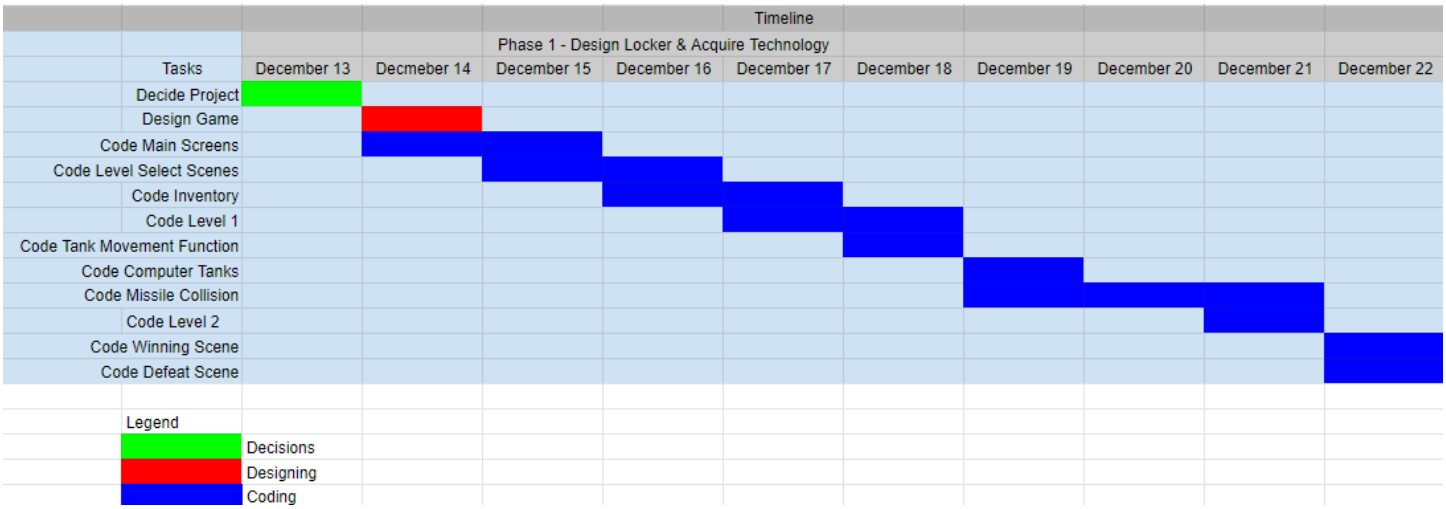
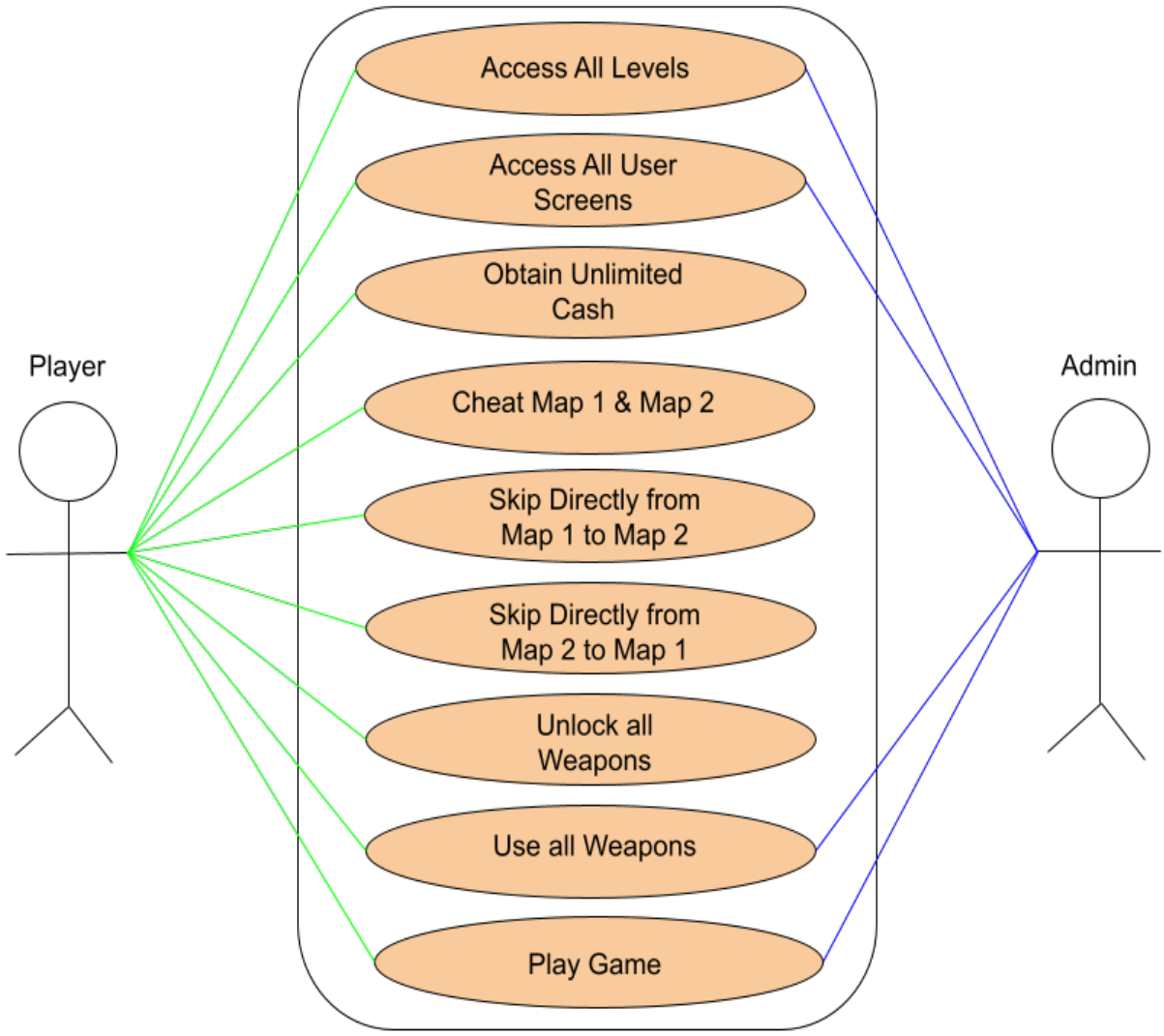
**Program Flowchart:**



**Gantt Chart:**




**Use Case Diagram:**