Specifications for CopRobGame (Console Version)

1. Ask user if they want to play

* If yes, start game
* If no, print end message

1. Start of Game

* Welcome message
* Rules/How to Play

1. Ask user how many moves the Cop is allowed
   * handle input errors
2. Create Vertex

* explains how to create vertices
* the user is prompt to create vertices until “Done” is entered
* prints appropriate messages when creating a vertex
* handle input errors

1. Create Edge

* explains how to create edges
* display the vertices to the user
* prompts user to create edges until “Done” is entered
* prints appropriate message when creating edges
* handle input errors

1. Place Player

* explains how to place a player on the graph
* display whose turn it is to place their player (Cop First)
* display player’s position, edges & vertex to the user
* prompts user to place their player
* first the Cop is allowed to place their self at any vertex
  + ask which vertex they want to be placed
* second the Robber is allowed to place their self at any vertex
  + ask which vertex they want to be placed
* prints appropriate message when placing players
* handle input errors

1. Move player

* players will alternate moving to adjacent vertices or not moving at all
* explains how to move a player
* display how many moves the cop has left
* display whose turn it is
* displays the current positions of both players and created edges
* prompts users to move their player
* cop is allowed to quit on his turn by typing “cop gives up”
* handle input errors

1. The Cop wins by occupying the same vertex as the robber
2. The Robber wins by making the Cop give up or the cop exceeds their allowed moves (step 3)
3. When game has ended either by step 10 or step 11

* Print who has won & players position, vertices & edges created

1. Ask user if they want to play again

* If yes, restarts the game
* If no, game ends & prints: thanks for playing