**Treasure Hunt**

Finite State Automata

Project Scope

The scope of is project is to design a Treasure Hunt game, in which a player has to find a route to treasure island by traversing through multiple islands and building a map to the destination.

The project scope consists of 3 things :

* Fix number of Islands
* Each Island having two routes to other island
* Updating a map upon traversing

1. Fixed number of Islands  
     
    The game will be having fixed number of islands one of which will be a treasure island (unknown to the user at start) which a player has to find by traversing to the islands.
2. Two Paths to other Islands  
     
    Upon reaching any island, player will have choice of two Ships, Ship-A and Ship-B, both leading to different islands. He can not know to which island which island he would reach when he chooses a particular ship until he reaches the island. The User interface will be having two buttons to decide which ship to choose.
3. Updating a map upon traversing

The map of that route will be drawn on the screen when a player takes a ship and moves to another location. The player can look at the map in future and fathom a destination he would reach if he travels on that path. Task of the player is to establish the connection between these routes and to find the shortest path to the Treasure Island.

The goal of this game is to teach players about Finite State Automata, which is also important in understanding concepts of UML State diagrams.