Under Us

A Sea Exploration Adventure
(The Hunt for the Lost Sea Cucumber)

[Team Tali]

[Team Members:]

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Team roles

Phase Leader - keagan rieder

Secretary - Logan Feit

Quality Assurance - Maxenne Jubane

Mentor - anyone at anytime

Developer - anyone at anytime

Game Overview

Plot

- Captain's dead, communications gone, engine is not working. You're a crew member who has to collect items to fix the problems and maybe make some sea cucumber friends along the way.
- First the Soldier man sends you to look for engine parts, you get it, fix it, talk to the Soldier again.
- Second the chef tells you about missing food and equipment, he sends you to look for the source. Gives you keys and a flashlight.
- Looking at the newly unlocked rooms you find the Stowaway who has been causing a ruckus in the submarine.
- During the interrogation on the Stowaway the comms for the submarine is cut. You must find spare parts underwater to fix this grave emergencies.
- The underwater section is unlocked and now explorable. You try to find comms pieces in the dangerous waters. What you do and find there from the randomly generated maps will lead to what ending you get.

Map Layout

NullPtr (0,0)	infirmary (0,1) >>	Kitchen (0,2) < ↓ >	Crew Quarters (0,3) <<	NullPtr (0,4)
bathroom (1,0) >>	Hallway (1,1) < >	Hallway (1,2) < ^ > ↓	Hallway (1,3) <>	Control Room (1,4) <<

nullptr (2,0)	Engine (2,1) -Broken on start >>	AirLock (2,2) < ^ >↓	Storage (2,3) <<	NullPtr (2,4)
Sea (3,0) (Sea Cucumber Cave/ Atlantis/ Lost City) Random until subs progressed far enough	Sea (3,1) Randomly generated	Sea (3,2) this isn't generated and is always a plains type < ^ >	Sea (3,3) Randomly generated	Sea (3,4) (ShipWreck) Random until subs progressed far enough

Most classes inherit from parent classes. These classes constructors will set inherited things to be specific for that class

Class Designs

Location Branch (Environment)

MapCell
Base Definition of Locations. Holds information about locations which is designed to be overwritten/changed per specific location Used by other locations as a based to be built upon and become more specific
protected: # Map<String,NPC> presentCharacters # map<string,Item> neededItems; # map<string,item> roomsItem; it # vector<string> PossibleMovement; # Int x; # Int y;
Public: +MapCell(); +Void AddCharacter(string,NPC) +Void RemoveCharacter(String) +Void SetRequiredItems(Map<string,int>) +Map<string,int> CheckNeededItems() +void SetPossibleMoves(vector<string>)

AirLock
Inherits from Map Cells, the constructor sets the enum type to be equal to the classes type,
private: - Bool fromSea; - same as map cell
public: +AirLock(); +Void EnteredFrom() +Bool GetEnteredFrom(); same as map cell

+vector<string> GetPossibleMoves()

Interactions for locations
+Item SearchLocation();
+Void MoveUp()
+Void MoveDown()
+Void MoveLeft()
+Void MoveRight()

Engine Room
Inherits from the Map cel,and overwrites stuff to better suit the engine room Allows the ship To move and random sea terrain to generate
private: - Bool engineFixed; same as map cell
Public: + Void FixEngine(); same as map cell

Crews Quarters
Inherits from the Map cel,and overwrites stuff to better suit the Crews Quarter
same as map cell
same as map cell

Kitchen
Inherits from the Map cel,and overwrites stuff to better suit the Kitchen - Main location of "Chef" hint giver NPC
same as map cell
same as map cell

Infirmary
Inherits from the Map cel,and overwrites stuff to better suit the Infirmary
same as map cell
same as map cell

Bathroom
Inherits from the Map cel,and overwrites stuff to better suit the Bathroom

Control Room
Inherits from the Map cel,and overwrites stuff to better suit the Control Room - Holds the radio

same as map cell		bool fixed; same as map cell	
same as map cell		void FixComms(); Bool CheckFixed(); same as map cell	

Storage		Hallway	
Inherits from the Map cel,and overwrites stuff to better suit the Storage		Inherits from the Map cel,and overwrites stuff to better suit the Hallway	
same as map cell		same as map cell	
same as map cell		same as map cell	

SeaLocation - randomly generated

UnderWaterCave		UnderWaterPlain	
Inherits from the Map cel,and overwrites stuff to better suit the UnderWaterCave Less spawn chance compared to a plains		Inherits from the Map cel,and overwrites stuff to better suit the UnderWaterPlain This cell also has a higher chance to spawn compared to cave	
private - Int[] spawnValues; same as map cell		private - Int[] spawnValues - same as map cell	
public + void SetSpawnChance() + Int* GetSpawnChance() same as map cell		public + Int* GetSpawnChance() same as map cell	

Lost City		ShipWreck	
Inherits from the Map cel,and overwrites stuff to better suit the UnderWaterCave Very rare chance to spawn until sub has progressed far enough in which it become guaranteed		Inherits from the Map cel,and overwrites stuff to better suit the UnderWaterPlain Very rare chance to spawn until sub has progressed far enough in which it become guaranteed	
private		Private	

- Int[] spawnValues; same as map cell	- Int[] spawnValues - same as map cell
public + void SetSpawnChance() + Int* GetSpawnChance() same as map cell	public + Int* GetSpawnChance() same as map cell

WorldMap Branch

GameMap
Holds information that relates to map and interaction with it. this also checks the players cords to see what room they are in/what they can do
private: - MapCell** map - int travelProgress; //story stage
- Map(); - ~Map(); - MapCell GetCell (int,int); - CheckTarget(int,int); - void SetCell (MapCell* Cell); - void RegenSea();

MapGen
Generates the lower Half (1x5) of the map which contains the sea locations. upon the player entering the Airlock of the submarine. this is to sorta simulate the sub moving
- MapGen() - ~MapGen() - MapCell** RunGenerator(bool);

Branch: Input/OutPut

GameOutput
Handles the output, this is also where the story is held. Depending on what the player does/different checks the Story Summary will Change
public: + void Run(); + Void Print(); + Void GetPlayerInput(); + Void CheckInput(); + Void Story Summary();

Help
Inherits from the Map cel,and overwrites stuff to better suit the Hallway
void ListHelp(); Void ListIntercations();

GameInput
Handles Input for the game
- string input;
Public: + void MoveMent() + void ReadInput()

Branch: items (Object)

Item
Base Item Definition
protected # String name; # String description; # Int scoreValue;
public: + Void SetName(string) + String GetName() + Void SetDesc(string)

Sea Cucumber
A Sea cucumber
Same as item
Same as item

FlashLight
Item that let you access specific rooms, previously unaccessable
Same as item
Same as item

Tools
Class definition for tools, which can be used to breach sucken ships, Attack sea creatures, and repair things through using SpareParts
Same as item
Same as item

SpareParts
Parts that can be found throughout the game but primarily inside of sunken ships, and are used to repair various things
Same as item
Same as item

Treasure
Some Treasure can be rarely found inside of a sunken ship.
Same as item
Same as item

First Aid kit
A First aid kit,
Same as item
Same as item

Branch Characters

PlayerData
Handles the Player Data
private: - Int xCord; - Int yCord - map<string,Pair<int,Item>> neededItems; - Int score; - Int storyProgress;
public: + string GetStoryProgress. + Void SetStoryProgress + Int GetXCord(); + Int GetYCord(); + Void SetXCord(); + void SetYCord(); + Void AddItem(string, item); + Void removeItem(string); + Item GetItem(string); + Void UpdateScore(int);

+ Int GetScore();

NPC	Captain - (dead)
Based Npc Class	Just the dead captain
protected map<string,Pair<int,Item>> neededItems; Map<int, string> dialog; Todo Variables	Same as Npc

public
void OutputDialog(int);
Void SetNeededItems
(map<string,Pair<int,Item>>)
map<string,Pair<int,Item>>
GetNeededItems()
 	
Void Talk(Int); //outputs dialog
	Same as Npc

EverythingMan	Chef
Guard/ Soldier / Mechanic - guy who runs around	- side quest giver, who also acts as the hint giver - this is done by dialog.
Same as Npc	Same as Npc
Same as Npc	Same as Npc

Doctor	HideAway/StowAway (storyAway)
The Dr	a stowaway aboard the ship. He is randomly found throughout the game and when spoken to, gives a summary of the story
Same as Npc	Same as Npc
Same as Npc	Same as Npc