**Joseph of Egypt**

**Description**

“Now therefore let Pharaoh look out a man discreet and wise, and set him over the land of Egypt. Let Pharaoh do this, and let him appoint officers over the land, and take up the fifth part of the land of Egypt in the seven plenteous years. And let them gather all the food of those good years that come, and lay up corn under the hand of Pharaoh, and let them keep food in the cities. “

Joseph has been given power over the land and now he must become the savior of Egypt.

As the major officer in Egypt, Joseph will administer all the preparations for the 7 harsh years of drought. He is responsible for storing enough grain, legume, and honey in the warehouse to last the people of Egypt through the 7 years of famine.

Joseph will have all of the resources needed within Egypt. Within Egypt there are all the resources needed for Joseph to save his people.

The game will last 20 turns. At the end of 20 turns the player will be told if they succeeded in saving the people. It requires 10 barrels of grain, 10 barrels of legume and 4 barrels of honey to win the game.

**End User Stories**

|  |  |
| --- | --- |
| Start Program  Start Game  Main Menu  Help Menu  Game Play Menu  View Menu  Construct Barrel  Harvest Resource  Collect building materials  View Game Map  View Items in Inventory  View locations at work  View time status  View location contents  Move Character  Save Game | Exit Game  Explore location |

**Start Program**

End user executes the program. Computer displays a welcome message with a description of the game. Computer prompts for the player’s name. End user enters their name. Computer displays a personalized message with the name of the player. Computer ensures a valid name is given and repeats the process until a valid name is entered.

**Main Menu**

Computer Display the main menu

G - Start Game

H - Get Help

S - Save the game

E - Exit Game

End user selects an option from the catalogue. Computer displays the desired option. If the option is invalid, the computer will show an error message. The program ends if Exit is selected.

**Help Menu**

Computer Display the Help Menu

O - Game Objectives

M – Player movement

H - Harvesting resources

D – Collecting wood

Q - Quit

End user selects a desired choice. Computer displays the new screen. Selecting Quit will return the user back to the previous menu or screen.

**View Menu**

Computer displays the view menu:

V- View game map

I- View Warehouse

C- View Cart Contents

T- View Time Status

L- View Location Contents

**Game play menu**

R- View Menu

M – Move to a new location

B -Construct barrels

H- Harvest resources

C- Collect wood

L- Load barrels

U- Unload cart

Q - Quit

The user enters a selection and the computer takes them to the indicated view. If Quit is selected, the computer shows the Main Menu.

**Move to a new location**

The computer displays a message prompting user to input coordinates of desired destination.

If coordinates are invalid, a message is displayed and user is prompted to reenter coordinates.

If the coordinates are valid, the player is moved to the indicated location. One action for that turn is used.

**Explore location**

Computer displays message describing the contents of the location and then the location is marked as visited. The game menu is then displayed.

**Construct Barrels**

Program ensures that user is in the city. If they are not an error message is displayed. If they are the user is prompted to enter the number of barrels they would like to construct. Computer will calculate x= W-N\*2 ( W= wood available and N= number of barrels). If x is larger or equal to zero then the user will be told they can build and that amount of wood will be removed from their resources stored. If x is less than 0 the user will be told that they do not have enough resources and prompted to input a different number. This will count as an action in a turn.

**Harvest Resource**

Computer ensures that user in a resource location. If they are not an error message is displayed. If they are then the user is asked how many units of the resource to harvest. If the number is invalid an error message appears and user is asked to reenter a number. If the number is valid, the computer calculates B-D/2 =x (B = barrels available and D = desired number of units). If x is larger or equal to zero then the user will be told they can harvest that amount of resource, it will be removed from that location and barrels filled. If x is less than 0 the user will be told that they do not have enough empty barrels and prompted to input a different number. This will count as an action in a turn.

**Collect Building Materials**

Computer ensures that user in a resource location. If they are not an error message is displayed. If they are then the user is asked how many units of the materials to harvest. If the number is invalid an error message appears and user is asked to reenter a number. If the number is valid, the computer calculates C-D/2 =x (C = cart space available and D = desired number of units). If x is larger or equal to zero then the user will be told they can collect that amount, it will be removed from that location and cart filled. If x is less than 0 the user will be told that they do not have enough cart space and prompted to input a different number. This will count as an action in a turn.

**Unload Cart**

Program ensures that user is in the city. If they are not an error message is displayed. If they are the user is asked if they would like to unload their cart. If yes, the resources in the cart are removed and added to the resources stored in the warehouse. This will count as an action for a turn. If no, game menu is displayed.

**Load Barrels**

Program ensures that user is in the city and they cart is empty. If either are not true an error message is displayed. If they are both true, the user is asked how many barrels to load. If number is more than 10, error is shown. If number is 10 or less, those amount of barrels are loaded and an action for that turn is taken.

**View Game map**

After selecting the option “View game map” the computer will show a screen with the image of the game map and the parts of the map that has been visited will be showed with a mark.

**View Warehouse**

The computer will show a message with the amount of all the resources stored in the warehouse.

**View Cart Contents**

The computer will show the contents of the cart.

**View Time Status**

The user will see the current time status, turns taken/turns remaining. When 20 turns have been taken, the game is over.

**View Location Contents**

User will be shown a list of items at current location.

**Save Game**

User can save the current game at the current status and have the option to continue or exit.

**Exit game**

As part of the menu, the exit command will take the user out the program, but before the command is executed, the program will ask the user if he/she is sure to leave the game, the condition then will take place, whether the user leaves or stays on the game.

**Location List:**

1. Center City

* Warehouse
* Blacksmith

2. Outerlands

* 12 wood
* 4 grain

3. Somewhereville

* 4 legume
* 8 wood

4. Sunneville

* 6 legume
* 2 honey

5. Woodsiton

* 12 wood

6. Clammer Falls

* 4 grain
* 4 legume

7. West Lands

* 8 wood
* 2 honey

8. Nearsville

* empty

9. Bean Town

* 6 legumes

10. Hapsitown

* 12 wood
* 2 honey

11. Shytown

* 12 wood
* 6 grain

12. Lotaland

* 4 wood
* 4 grain

13.

* 4 wood
* 2 grain

14

* 8 wood

15

* 4 wood
* 2 legume

16

* 12 wood

17

* 8 wood
* 2 grain

18

* 4 wood
* 2 legume

19

* 8 wood

20

* 20 wood

21

* 2 grain
* 2 legume

22

* 8 grain

23

* 8 legume

24

* 4 honey

25

* empty