

GAME RULES

GAME IS FOR 2 TO 4 PLAYERS. IF THERE ARE MORE PLAYERS, GAME GENERATES BIGGER MAP. PLAYER CAN CHOOSE DIFFICULTY OF THE GAME WHICH GENERATES DIFFERENT SURFACE ON MAP.

-IF YOU WANT TO BUILD A BUILDING YOU HAVE TO BUILD AN OUTPOST FIRST. THEN BUILDING AND THEN WORKERS TO THE BUILDING.

-YOU CAN REMOVE WORKERS BUT CAN'T DESTROY BUILDINGS.

-YOU CAN PUT AT MAXIMUM 3 WORKERS TO YOUR BUILDING.

EACH BUILDING HAS ITS OWN COST AND PRODUCTION:

OUTPOST: 150/200/200/25/0

FORTRESS: 1500/900/2000/3000/2500 INCREASE MAXIMUM NUMBER OF LEADERS BY 1

MINE: 300/200/200/200/0

FARM: 50/100/25/0/0

SAWMILL: 100/200/200/200/0

PRODUCTION

OUTPOST: --

FORTRESS: 5/0/0/0/0

MINE: 4/0/0/4/2

FARM: 1/5/0/0/0

SAWMILL: 3/0/5/0/0

EACH WORKER HAS ITS OWN RECRUITMENT COST

LABORER 10/25

ENGINEER 20/40

LEADER 40/30

ARISTOCRAT 200/ 60

EACH WORKER HAS ITS OWN PRODUCTION EFFECTIVITY (EXCEPT ARISTOCRAT)

LABORER 0.25/1.00/0.75/0.50/0.50

ENGINEER 1.25/0.25/0.25/0.25/1.00

LEADER 2.5X

ARISTOCRAT +0.1 INFLUENCE

EACH SURFACE HAS ITS OWN STATS

GRASSLAND 2/5/1/1/0

FOREST 1/3/5/1/0

DESERT 3/1/1/3/1

MOUNTAINS 1/2/2/4/4

SWAMP 2/1/2/3/3

HOW THE GAME ENDS:

GAME ENDS WHEN THERE ARE NO FREE TILES LEFT.

FINAL SCORE: 3 POINTS FOR EACH FORTRESS OTHER BUILDINGS EXCEPT OUTPOSTS ARE FOR 1 POINT. ARISTOCRAT GIVES 0.1 POINTS PER ROUND (IF HE DOESN'T GET MONEY AND FOOD YOU DON'T RECEIVE BONUS POINTS THIS TURN)

GAME CONTROLS

EACH TIME YOU WANT TO DO AN ACTION, PRESS A BUTTON IN THE RIGHT PANEL AND THEN CLICK ON THE TILE WHERE YOU WANT TO DO THE ACTION. WHEN YOU FINISH YOUR TURN PRESS BUTTON END TURN AND NEXT PLAYER CAN DO HIS ACTIONS. AT THE BEGINNING OF EACH TURN YOU RECEIVE RESOURCES AND YOU CAN DO ANOTHER ACTIONS.

Division of labor

Most of the time we worked together in the same place. We were helping each other out as much as we could. Most of the time we divided the work as such:

Dan Kunz: GUI, balancing game, rules, graphics, game functionality

Jan Bubik: Unit testing, painting functionality, game functionality

Bugs and missing features

We created worker farmer but not used. We know about many features but it would make the game very complex, for example calculating player score based on how close together are the outposts built, so the player would basically not be awarded by placing outpost somewhere far away from his other outposts.

Software implementation

The implementation of our game is shown in the included class diagram. The code documentation of classes are provided in header files of each class implemented by us. The documentation can be further generated into HTML or latex using Doxygen.

Key classes

The main logic of game is implemented in MapWindow class. The logic is that a user clicks on button and then on tile. That triggers a function which checks for the object type and after checking if the object can be drawn, it displays it on the screen. MapWindow uses GameScene for displaying the Game Window. Each object on the scene is represented by MapItem. In our game, the Players objects are only tiles, which holds reference of buildings and workers.

Summary

The game works properly and is playable but there is always space for improvement as we mentioned in missing features. In the game we did not use many of the implemented methods of classes but we made our own, mainly in our MapWindow class.