# Programing exercise

## Objective

Program in any language the game as described below, no GUI is required, this is a text based game.   
You will need to decide the command style and design. (You can use examples below or create your own)

Take in account the design of the game, actual gameplay (turns, end of game, etc.) within the limits of the given time.

You might not be able to complete this exercise, take this under consideration.

Playing Grid: (8x8)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |  |  |  |
|  | A | B | C | D | E | F | G | H | I |

## Units:

**NOTE:**

**(3x3) 10**  
 means 10 damage is inflected on a 3 by 3 square area

|  |  |
| --- | --- |
| **Short Range Archer** | |
| Health | 100 |
| Damage | 20 |
| Range (max) | 3 |
| Movement | 1 |

|  |  |
| --- | --- |
| **Long Range Archer** | |
| Health | 40 |
| Damage | (3x3) 10 |
| Range (max) | 5 |
| Movement | 1 |

|  |  |
| --- | --- |
| **Swordsman** | |
| Health | 200 |
| Damage | 30 |
| Range | 1 |
| Movement | 1 |

|  |  |
| --- | --- |
| **Spearman** | |
| Health | 120 |
| Damage | 22 |
| Range (max) | 2 |
| Movement | 2 |

**Same for Mage   
(2x2) 25**  
means 25 damage is inflected on a 2 by 2 square area

|  |  |
| --- | --- |
| **Mage** | |
| Health | 80 |
| Damage | (2x2) 25 |
| Range (max) | 2 |
| Movement | 1 |

|  |  |
| --- | --- |
| **Brute** | |
| Health | 250 |
| Damage | 10 |
| Range | 1 |
| Movement | 1 |

|  |  |
| --- | --- |
| **Runner** | |
| Health | 60 |
| Damage | 15 |
| Range | 1 |
| Movement | 6 |

|  |  |
| --- | --- |
| **Healer** | |
| Health | 80 |
| Damage | -15 |
| Range (max) | 4 |
| Movement | 1 |

## Gameplay

### Setup Stage:

Each player has at his disposal 2 long range archers and 1 of each of the rest of the units  
placing the units is as follows:

1. In turns each player can position one of his units of his choice in the first 2 rows (on his side)  
   [First player gets rows 1,2 and second player gets rows 7,8]

Example:  
 player 1 positions the Long range archer in bottom left corner   
(command might look like *LRA A1*)  


Now its players 2 turn, he positions Mage on top right corner  
 (command might look like *Mage 8I*)   


1. Once last unit is placed, the game starts.

### Game Stage:

In turns each player has **2** plays, a play is defined as **one** of the following:

* Moving a unit
* Attacking with a unit

(Units allowed moves, attack distance and all stats are defined at beginning of document)

**Example**

Player 1 decided to move his long range archer 1 square forward [cli example: *move lra A1,A2* ]

That finishes his first ‘*play’*.   
He can now use his second ‘*play’*. He decides to move his Runner 6 squares in diagonal

Now its player 2 turn he uses his first ‘*play*’ to move his long range archer 1 forward and his second ‘*play’* to attack with the same long range archer.

Now again it’s the first players turn, this goes on until one side loses all his units.   
The player left with units is declared the winner.

Good luck