



## INTRODUCTION

Welcome tacticians! Your mission, should you choose to accept it, will have you engage in a battle of wits by writing AI to control an army of knights, archers, and loyal workers.

## OVERVIEW

In Merlin.io, the objective is to capture the flag (in this case, a Merlin) from the enemy base and bring it to your own base, while defending your own. Each team starts with a singular worker spawned at their base, which is also the location of the flag.

## THE BATTLEFIELD

```
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
X  C                               B                               C  X
X    X                               X    X
X    X          C          C          X    X
X    X          XXXXXXXXXXXXXXXX          X    X
X                                           X
X    S                               S          S    X
X                                           X
XXXXXXXXX          G          XXXXXXXXXXXXX
X          G                               X
X    S                               S          S    X
X                                           X
X    X          XXXXXXXXXXXXXXXX          X    X
X    X          C          C          X    X
X    X                               X    X
X  C                               B                               C  X
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

**Legend:** X = Wall, B = Base, C = Copper Ore, S = Silver Ore, G = Gold Ore,

As grand commander of your army, you will have to manage a few things:

- **Gold:** Gold is used to purchase units. You begin the game with 5 Gold, and passively earn 2 Gold each turn. More gold can be reproduced using **Worker** units, which can harvest **Resources**.
- **Resources:** There are ore nodes scattered throughout the map that can be mined by **Workers** to produce gold. Ore that is harder to harvest (i.e. requires a higher level unit and takes more time), produces more gold.

There are three types of ore nodes:

1. Copper Ore: Can be harvested by all workers, and produces 2 Gold
  2. Silver Ore: Can be harvested by Lvl 2 Workers and produces 6 Gold.
  3. Gold Ore: Can be harvested by Lvl 3 Workers and produces 20 Gold.
- **Units:** These loyal members of your army will assist you in your crusade in their own different way. Units have a level, and based on their level they will have different costs/stats/abilities.
    - **Workers:** these units have the ability to harvest resources. If they are next to a resource that they have the ability to mine, the player can command them to harvest it, producing gold based on the resource level. Workers can also summon other level 1 units beside them by using their army's gold.
    - **Scouts:** these units have the ability to capture and run with flags. They are nimble, but fragile.
    - **Knight:** these units are strong, resilient, and can attack units in close proximity but have limited mobility.
    - **Archer:** these units can fire projectiles to enemy units, can shoot over walls

**Exact stats such as health, and more can be found on the Tutorial page at:**

<https://mcss.utmrobotics.com/battlecodemerlin>