PROTECT YOUR TERRITORY (Work in Progress)

Premise:

* British vs French, during 1300s and 1400s
* Decently sized square grid that contains buildings (for resources and technology) and control points (to win) that units can roam and participate in turn-based combat on
* Two starting sides of the map, with middle side containing the most resources and the best technologies

Units:

Unit types include: Infantry (melee only fighters that use sword and shield, or just a two handed sword depending on faction), Archers (ranged only units that excel when defended properly), Support (units that can heal and convert, amongst other things), Light Cavalry (lightly armored, but fast. Can also scout) Heavy Cavalry (heavily armored, can take a lot of punishment), Ranged Siege Engine (attack from afar, takes time to set up and needs lots of protection. Also slow), Special Unit (depends on faction, usually pretty strong, but expensive and can only have 2 of them active at a time).

* British:
  + Swordsmen (Infantry):
    - Training Cost: 150 Iron
    - Training Time: 1
    - Maintenance Cost: 15 Iron
    - Pop Cost: 1
    - HP: 60 points
    - Armor: 7 points
    - Attack Damage: 14 points
    - Number of attacks per turn: 3 attacks
    - Range: melee (adjacent)
    - Speed: 3 Tiles
    - Special ability: Rage (reduce damage by 50% for the next two turns, but after that the unit becomes exhausted, becoming unable to move and dealing 50% less damage for one turn. Cooldown starts once all effects wear off, needing 5 turns to recharge)
    - Info: British Swordsmen use two handed swords, forgoing the added defense of a shield in favor of the added attack of these big swords. They prefer to rush headlong into battle while raging, taking less damage and effectively tanking for their allies
  + Longbowmen (Archers):
    - Training Cost: 150 Iron
    - Training Time: 1
    - Maintenance Cost: 15 Iron
    - Pop Cost: 1
    - HP: 40 points
    - Armor: 2 points
    - Attack Damage: 20 points
    - Number of attacks per turn: 2 attacks
    - Range: 3 Tiles, no attacks can be made against adjacent enemies
    - Speed: 3 Tiles
    - Special ability: Deadeye (gain increased range (1 more tile) and double your attack damage for the next two turns while reducing your number of attacks to 1 and armor to 0 for the duration. Cooldown starts once effects wear off, needing 3 turns to recharge)
    - Info: British Longbowmen use their famous bows to great effect in battle, having one of the longest ranged attacks while dealing heavy damage at the same time. However, when confronted in melee range, they become practically useless, as they cannot shoot at an adjacent target
  + Priest (Support):
    - Training Cost: 50 Gold
    - Training Time: 2
    - Maintenance Cost: 10 Gold
    - Pop Cost: 2
    - HP: 30 points
    - Armor: 0 points
    - Attack Damage: None, but selecting an allied living unit within range will heal it for 20 points
    - Number of attacks per turn: 1 attack
    - Range: 2 Tiles
    - Speed: 2 Tiles
    - Special ability: Convert (Select an enemy living, not a siege engine, unit within 5 tiles and attempt to convince it to join your side. Generate a random number between 20 and 80, if the number is equal to or exceeds the unit’s current HP, the unit is converted, but is unable to act during this turn. Cooldown is 3 turns on a failure, 5 on success)
    - Info: British Priests were reluctantly giving over by the church to help in the war, and they attempt to soothe the hearts of their allies and convert weak enemies in order to support the war effort
  + Dragoons (Light Cavalry):
    - Training Cost: 200 Iron
    - Training Time: 1
    - Maintenance Cost: 20 Iron
    - Pop Cost: 1
    - HP: 70 points
    - Armor: 4 points
    - Attack Damage: 17 points
    - Number of attacks per turn: 2 attacks
    - Range: 2 Tiles, can attack adjacent enemies too
    - Speed: 4 Tiles
    - Special ability: Sprint (Gain 3 more tiles of movement speed for the next 3 turns. After that, speed reduced to 3 tiles for the next 3 turns. Cooldown is 1 turn after the speed reduction is over
    - Info: British Dragoons are fast light cavalry equipped with muskets who can harass enemy units and kite around them, dealing significant damage in the process. They also serve as very good scouts, considering their Sprint ability
  + Knights (Heavy Cavalry):
    - Training Cost: 300 Iron 125 Gold
    - Training Time: 3
    - Maintenance Cost: 50 Iron 25 Gold
    - Pop Cost: 3
    - HP: 100 points
    - Armor: 8 points
    - Attack Damage: 20 points
    - Number of attacks per turn: 3 attacks
    - Range: melee
    - Speed: 3 Tiles
    - Special ability: Charge (Gain 1 more tile of movement speed for one turn, as well as a 5 point increase in attack damage, but taking 50% more damage for the next 2 turns. Cooldown is 1 turn after the effects wear off)
    - Info: British Knights are the best of the best. They’re heavily armored cavalry that use long polearms to make a huge dent in enemy formations, in the hopes of scattering them and making them an easy target for the British Longbowmen. However, their equipment and training is very costly, so they must be managed well, and they remain vulnerable to the heavy projectiles of siege engines
  + Catapult (Ranged Siege Engine):
    - Training Cost: 250 Iron 100 Gold
    - Training Time: 2
    - Maintenance Cost: 40 Iron 20 Gold
    - Pop Cost: 2
    - HP: 50 points
    - Armor: 5 points
    - Attack Damage: 40 points
    - Number of attacks per turn: 1 attack
    - Range: 3 Tiles, but no attacks can be made against adjacent enemies
    - Speed: 2 Tiles
    - Special ability: Overload (Siege engine operators heavily exert themselves, loading and firing much faster than usual. Gain an extra attack for the next 2 turns but lose control over the unit for 1 turn after that. Cooldown starts after you gain control back, needing 2 more turns to recharge)
    - Info: British Catapults are excellent at concentrating their fire on one unit to destroy it. What they lack in speed they make up for in firepower. Just hope you don’t lose one of these. They can be expensive
  + Royal Guard (Special Unit):
    - Training Cost: 500 Iron 200 Gold
    - Training Time: 5
    - Maintenance Cost: 80 Iron 40 Gold
    - Pop Cost: 5
    - HP: 80 points
    - Armor: 8 points
    - Attack Damage: 40 points if adjacent, 25 if ranged
    - Number of attacks per turn: 2 attacks
    - Range: 2 Tiles, or melee
    - Speed: 4 Tiles
    - Special ability: Last Stand (Double your armor to 16 points for the next 2 turns and regain 40 health points instantly. Cooldown starts after the effects wear off, needing 10 turns to recharge)
    - Info: The British Royal Guard are responsible for protecting the British Royal Family, but due to the current circumstances of the war, they have been authorized to join the fight to keep the British Lands safe. They will fight to their last breath, and can get a second wind sometimes and keep on fighting. They are equipped with a heavy musket for ranged attacks and a long sabre for melee attacks
* French:
  + Men at arms (Infantry):
    - Training Cost: 150 Iron
    - Training Time: 1
    - Maintenance Cost: 15 Iron
    - Pop Cost: 1
    - HP: 75 points
    - Armor: 8 points
    - Attack Damage: 11 points
    - Number of attacks per turn: 3 attacks
    - Range: melee
    - Speed: 2 Tiles
    - Special ability: Defend (Reflect 50% of any melee damage taken back to its source for the next 2 turns and become immune to ranged damage for 1 turn. Cooldown starts after effects wear off, needing 4 turns to recharge)
    - Info: The French Men at arms are excellent defenders, preferring to use a sword and shield combination to keep their enemies at bay and protect their ranged allies. They can increase their defenses even further sometimes and form an impenetrable wall
  + Crossbowmen (Archers):
    - Training Cost: 150 Iron
    - Training Time: 1
    - Maintenance Cost: 15 Iron
    - Pop Cost: 1
    - HP: 55 points
    - Armor: 4 points
    - Attack Damage: 16 points
    - Number of attacks per turn: 2 attacks
    - Range: 2 Tiles, can attack adjacent enemies
    - Speed: 3 Tiles
    - Special ability: Rapid Fire (Gain an extra attack for the next 2 turns but reduce your damage by 3 points. Your armor increases by 3 points for the duration as well. Cooldown starts after duration, needing 3 turns to recharge)
    - Info: French Crossbowmen, while limited in range compared to British Longbowmen, make up for that with their increased resilience and better close ranged performance. They prefer to either attack right from behind allied men at arms or while standing side by side, facing the enemy
  + Homme Saint (Support):
    - Training Cost: 50 Gold
    - Training Time: 2
    - Maintenance Cost: 10 Gold
    - Pop Cost: 2
    - HP: 40 points
    - Armor: 3 points
    - Attack Damage: None, but if an allied living unit within range is selected, it will get healed for 20 points
    - Number of attacks per turn: 1 attack
    - Range: 2 Tiles
    - Speed: 2 Tiles
    - Special ability: Bless (Select an adjacent allied living unit. For the next 3 turns (so nothing happens on the turn that it’s used), the unit will heal for 10 points every turn and will deal 3 more points of damage per attack. Cooldown starts after effects wear off, needing 4 turns to recharge)
    - Info: The French Homme Saint is a holy man who has decided to try to help the suffering and inspire the weak. He’s a comforting presence in the French army, and can sometimes swing entire battles in the favor of the French if used appropriately
  + Hussar (Light Cavalry):
    - Training Cost: 200 Iron
    - Training Time: 1
    - Maintenance Cost: 20 Iron
    - Pop Cost: 1
    - HP: 55 points
    - Armor: 5 points
    - Attack Damage: 20 points
    - Number of attacks per turn: 2 attacks
    - Range: melee
    - Speed: 4 Tiles
    - Special ability: For the King (The Hussars rally, becoming immune to death for one turn and increasing their attack damage by 15 points while losing one attack move for two turns. Cooldown starts after effects wear off, needing 4 turns to recharge)
    - Info: French Hussars are very loyal to their king and country and will fight to the last man. They are excellent light cavalry, and while they lack the range of English Dragoons, the amount of damage that they can dish out is nothing to scoff at
  + Chevalier (Heavy Cavalry):
    - Training Cost: 300 Iron 125 Gold
    - Training Time: 3
    - Maintenance Cost: 50 Iron 25 Gold
    - Pop Cost: 3
    - HP: 80 points
    - Armor: 10 points
    - Attack Damage: 18 points
    - Number of attacks per turn: 3 attacks
    - Range: melee
    - Speed: 3 Tiles
    - Special ability: Valor (The Chevaliers put away their shields, instead wielding their swords with two hands. Lose 5 points of armor but gain 12 points of attack damage for the next 2 turns. Cooldown starts after that, needing 2 turns to recharge. Once cooldown begins, if the unit is still alive, regenerate 50% of damage taken for those 2 turns)
    - Info: The French Chevaliers are very respected knights, and their experience and strength show on the battlefield. They wield a sword and shield but can choose to put away that shield to gain a large boost in damage. They are very expensive, but well worth the price.
  + Trebuchet (Ranged Siege Engine):
    - Training Cost: 250 Iron 100 Gold
    - Training Time: 2
    - Maintenance Cost: 40 Iron 20 Gold
    - Pop Cost: 2
    - HP: 60 points
    - Armor: 6 points
    - Attack Damage: 35 points
    - Number of attacks per turn: 1 attack
    - Range: 4 Tiles, but cannot attack adjacent units. Furthermore, the Trebuchet needs to pack and unpack in order to be able to move. It takes a full turn to do either action, during which it cannot move or fire. If it does either of those things before trying to pack or unpack, then it cannot do so during that turn
    - Speed: 1 Tile
    - Special ability: Haste (The Trebuchet can pack or unpack instantly, without needing a turn to do so. This can be done once, before the cooldown period occurs. It needs 5 turns to recharge)
    - Info: The French Trebuchet is a very powerful siege engine with long range and extra durability. However, it is limited by its mobility, and so extra care must be taken when planning out troop movements alongside the Trebuchet
  + Musketeer (Special Unit):
    - Training Cost: 500 Iron 200 Gold
    - Training Time: 5
    - Maintenance Cost: 80 Iron 40 Gold
    - Pop Cost: 5
    - HP: 100 points
    - Armor: 10 points
    - Attack Damage: 30 if adjacent, 20 if ranged
    - Number of attacks per turn: 2 attacks
    - Range: 3 Tiles if ranged, adjacent if melee
    - Speed: 3 Tiles
    - Special ability: En Garde (The Musketeer raises his sword up mockingly at the enemy, gaining an extra attack for the next two turns as well as becoming immune to all damage for the duration. Cooldown starts right after, needing 3 turns to recharge)
    - Info: French Musketeers are the best of the best. Armed with a rapier and a flintlock pistol, they excel at dealing damage both at range and in melee. Furthermore, they are extremely durable, and can survive even the toughest of battles. They are an irreplaceable part of the French army

Unit Statistics:

* Training Cost: The amount of resources lost at creation of unit
* Training Time: The number of turns it takes to produce a unit at a castle or a spawner
* Maintenance Cost: The amount of resources drained every turn while unit is controlled
* Pop Cost: The amount of population points it costs to maintain the unit
* HP: Health Points. Lose all of these and the unit dies
* Armor: Every time the unit takes damage from an attack, subtract this value from the damage value of the attack to determine how much damage the unit takes. If the unit has some other damage resistance active at the same time, such as a 50% reduction in melee damage, then subtract the flat value first before applying the percentage reduction
* Attack Damage: How much HP damage each attack a unit makes does. If the unit has a percentage increase in damage, apply any flat bonuses first before applying the percentage increase
* Number of attacks per turn: How many separate attacks a unit can make in a single turn. The attacks can all be at the same enemy, or to different enemy units
* Range: How many tiles can a unit’s attack reach. Melee attacks can only reach the adjacent 8 tiles around a unit, while ranged attack can reach the specified number of tiles. If there is a situation where the target is not in a straight path, from the unit, but is rather in something like NorthEast, NorthEast, NorthWest, then the program should determine what the shortest path to this target is, and if the distance of this path is equal to or less than the range of the attack, it should succeed (This can be potentially done with a simple search function, although if not feasible we will have to change how it’s accomplished and what attacks are allowed or not. Hopefully, it’ll work)
* Speed: The number of tiles a unit can move. Again, just like Range, a unit should be able to move in paths that are not straight or just diagonal, but a combination of both. This can be determined to be in range or not via a search function. On another note, if a unit that is adjacent to an enemy unit capable of attacking adjacent units moves out of its space (so for example, a longbowmen that is one tile north of a man at arms moves one more tile north), the stationary unit will make an opportunity attack against the moving unit. This will occur every time a unit attempts to escape from the space of an enemy unit, except if the enemy unit cannot attack adjacent targets.
* Special ability: This can be activated by pressing a button on the interface when the unit is selected, and then doing what the ability requires to be done in order to fully activate it, like clicking on an allied unit to use Bless

Map:

* They include buildings and are divided into three sections; one section for each player and a middle section where most fights will happen, that will also contain the control points needed for victory
* They can be static at first. Just design 3 maps that will look the same every time, and if we eventually get time to do so, we can upgrade it so that once we select a map size, the map will be randomly generated
* Castle in each faction’s area is the unit spawner. Units can spawn on the castle, as well as on any adjacent tile to it. If all tiles are full, production is halted until units are moved. Only one unit at a time can be on top of any one tile.
* There are two types of resources: Iron (used for all units, except support units) and Gold (used for special unit, heavy cavalry, ranged siege engines, and support units)
* Multiple Sizes (Small, Medium, and Large):
  + Small:
    - 35 Tiles for each faction area, and 70 tiles for the middle
    - 1 control point in the middle, which provides one point to the controlling faction’s score every turn. Once a faction reaches 50 points, the faction wins
    - 8 technology buildings. Each technology building will be empty initially, so capturing it only requires a unit to occupy its space. Capturing a building any time after that requires that any occupying unit be killed a unit of your own army be placed on top of the building instead. 2 buildings will be deep in each faction’s area, and 2 at the border of each faction’s area with the middle area (or right at the beginning of the middle area adjacent to each faction). The ones in the faction area would provide technology to train faction special units and support units while the ones in the middle area would help produce heavy cavalry and ranged siege engines. If a faction captures one of the enemy technology buildings, they gain nothing, but their enemy can no longer produce those units
    - Two spawner buildings will be in the middle area as well. One close to each faction’s area. These buildings, when captured, can produce units there just like a faction’s castle can. Add a production queue for each spawner captured. What this means is that having a spawner allows you to build two units at the same time instead of one unit at a time, and two spawners mean 3 units at a time
    - Population cap of 30
    - Starting Resources and Base Resource Generation Rate: Start with 200 Iron and 100 Gold, and generate 100 Iron every turn, no base gold generation
    - Max Resources Storable: Iron (1000), Gold (500)
    - Resource Buildings: 2 Iron buildings inside every faction area, 4 Iron inside middle area (1 each on faction border, and 1 each deeper in the middle area). 3 Gold buildings inside middle area (1 each along the way to the middle, and one right in the center). Iron buildings give 100 Iron every turn to the controlling faction. Gold buildings give 50 Gold every turn to the controlling faction
    - Starting Units: Start with 2 archers, 2 infantry, and 1 light cavalry for each faction
  + Medium:
    - 50 Tiles for each faction area, and 100 tiles for the middle
    - 3 control points in the middle, which provide one point each to the controlling faction’s score every turn. Once a faction reaches 200 points, the faction wins
    - 8 technology buildings. 2 deep in each faction’s area, and 2 at the border of each faction’s area with the middle area (or right at the beginning of the middle area adjacent to each faction). The ones in the faction area would provide technology to train faction special units and support units while the ones in the middle area would help produce heavy cavalry and ranged siege engines. If a faction captures one of the enemy technology buildings, they gain nothing, but their enemy can no longer produce those units
    - Two spawner buildings will be in the middle area as well. One close to each faction’s area. These buildings, when captured, can produce units there just like a faction’s castle can. Add a production queue for each spawner captured. What this means is that having a spawner allows you to build two units at the same time instead of one unit at a time, and two spawners mean 3 units at a time
    - Population Cap of 60
    - Starting Resources and Base Resource Generation Rate: Start with 400 Iron and 200 Gold, and generate 150 Iron every turn, plus 50 gold every turn
    - Max Resources Storable: Iron (2000), Gold (1000)
    - Resource Buildings: 4 Iron buildings inside every faction area, 8 Iron inside middle area (2 each on faction border, and 2 each deeper in the middle area). 6 Gold buildings inside middle area (2 each along the way to the middle, and 2 right in the center). Iron buildings give 100 Iron every turn to the controlling faction. Gold buildings give 50 Gold every turn to the controlling faction
    - Starting Units: Start with 3 archers, 3 infantry, and 2 light cavalry for each faction
  + Large:
    - 75 Tiles for each faction area, and 150 tiles for the middle
    - 5 control points in the middle, which provide one point each to the controlling faction’s score every turn. Once a faction reaches 350 points, the faction wins
    - 8 technology buildings. 2 deep in each faction’s area, and 2 at the border of each faction’s area with the middle area (or right at the beginning of the middle area adjacent to each faction). The ones in the faction area would provide technology to train faction special units and support units while the ones in the middle area would help produce heavy cavalry and ranged siege engines. If a faction captures one of the enemy technology buildings, they gain nothing, but their enemy can no longer produce those units
    - Four spawner buildings will be in the middle area as well. Two close to each faction’s area, one on either side. These buildings, when captured, can produce units there just like a faction’s castle can. Add a production queue for each spawner captured. What this means is that having a spawner allows you to build two units at the same time instead of one unit at a time, and two spawners mean 3 units at a time
    - Population Cap of 90
    - Starting Resources and Base Resource Generation Rate: Start with 600 Iron and 300 Gold, and generate 250 Iron every turn, plus 100 gold every turn
    - Max Resources Storable: Iron (4000), Gold (2000)
    - Resource Buildings: 6 Iron buildings inside every faction area, 12 Iron inside middle area (3 each on faction border, and 3 each deeper in the middle area). 9 Gold buildings inside middle area (3 each along the way to the middle, and 3 right in the center). Iron buildings give 100 Iron every turn to the controlling faction. Gold buildings give 50 Gold every turn to the controlling faction
    - Starting Units: Start with 4 archers, 4 infantry, and 3 light cavalry for each faction

**TASKS TO COMPLETE**

1. Update UML diagram
2. Update JIRA
3. Create a graphical interface for the game
4. Get sprites or create representations of the units and buildings to place on the map
5. Create the map and allow interaction between the player and the map (such as move unit, or capture building)
6. Create a fully functioning win condition (control point)
7. Allow for interaction between players (attack unit)
8. Allow for unit special ability activation
9. Display tooltips when hovering over certain icons (for example, when hovering over a unit’s icon, display the unit’s stats, especially health. Another example would be when hovering over an Iron generator, a tooltip should say what the building does. This isn’t very necessary yet)
10. Create the units and insert their stats and abilities
11. Faction and map selection screen
12. Come up with a better name, if possible