Requirements for Rise of Civilizations
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Rise of Civilization is a turn based strategy game. It is an intuitive and easy to play game that is suitable for everyone. As a strategy game, it requires the player to think logically in order to beat their opponents. This game features Player vs Player on a local network or the player may choose to play against the AI opponent implemented into the game.

Functional Requirements
Game Login and Configuration (These are not as important as the ones below. So no need to explain them in much detail.)

- When logging in, the system must allow the player to play in *Single player* (Play against Game AI) or *Multi Player* modes and this will allow the player to start a new game. In addition, the system must allow the player to resume a previously saved game.
- The system must also allow the player to change gameplay settings by selecting the *Options* menu such as setting the keyboard keys, game volume or the mouse sensitivity.
- The system must allow the player to gain knowledge about a particular era or civilization by selecting the *History* option.
- The system must allow the player to gain information different aspects of the game such as "Marching and Fighting", "Feeding the Army", "Training the troops" and "Fighting Battles" by selecting the *Learn to Play* option.
- The system must allow the player to customize the game with options such as population, difficulty level (Easy, Moderate and Hard), map style, starting age, civilization (Britons, Mongols, Goths and Persians), resources (Gold, Food and Stone), record game, building materials and player skill level.
- Finally, the system must allow the player to pause the game at any moment and to resume immediately thereafter.

Game Start

- The system must allow the player to begin the game after setting all the parameters.
- Once the game is started, the system must display a map for the player, along with the player's current score, timer and the name and number of all resources available. The system must display all the villagers and scout cavalry available with the player at that time.
- The system must display the health of the villagers and the weapons owned by the scout cavalry, by clicking on any of them. The system must allow the player to guide their movements.
- The system must also display the player with a town center which acts as center for storing food and researching technologies.
- The system must allow the player to discover unexplored areas by moving the scout cavalry to different places on the map.

Players Build Units

- They system must allow the player to be able to select villagers to build houses, buildings, lumber centers, farms, docks, gold, mills and stone mining units with resources available to them.
- The system must allow the player to select villagers to build mills and farms as renewable sources of food or to gain health and stack food from farming or hunting in the town center.
- The system must allow the player to build army units such as barracks, archery ranges, castles and associate armed men or archers with them.
- The system must increase the civilization's resources such as wood, gold, stone, food etc. based on the number of units built.

Players Engage in Conquest

- The system must allow the player to engage in conquests with other players and deploy their army units in a defensive or rigorous attacking response.

- The system must allow the player to use the available technologies, such as being able to see the units or type of army units (archery units) available with other player(s) in a conquest.
- The system must allow the player to be able to use the "Ring the Town Bell" feature in order to alert its villagers to seek shelter in the event of an attack.
- The system must allow the player to add new villagers in case they lose some in an attack.
- The system must allow the player to build castles which will have unique units of civilization which no other unit will have access to.

Players Engage in Trade

- The system must allow player to be able to trade with other users throughout the game. The system must allow the player to use the chat feature to help facilitate the trade of goods.
- The system must implement a scorecard for each trade to help evaluate the deal for each player.

Advancing to the Next Level and Ending the Game

- The system must advance the game to the next age when the player builds enough units and has enough resources to move to the next level.
- The system must end the game when the player has played in all the eras and has captured all the available resources, such that there are no more opponents left in the game to play against.

Non-Functional Requirements

Speed and Latency

The game must execute and run at least 120 fps (frames per second). The system in which the game is run on must have at least a 1.4 GHz (gigahertz) processor. The game should not have a load screen longer than 5 seconds between levels of gameplay. Finally, the time to reach the main menu upon the game launch shall not exceed 15 seconds.

Precision and Accuracy

The movement of the players being used must be precise and must have no lag in instruction and action. The leaderboard shall be updated daily with the utmost accuracy. The user must be able to resume their game from the point the user saved it at previously. The amount of resources of the user must be accurate after every trade. The map shall be with the utmost accuracy of the surrounding area.

Capacity Requirements

The game should be fully capable of logging in five users at a time, simultaneously. The size of the program shall not exceed 1 GB (gigabyte).

Reliability

There should be no loss of user data in the event of a system failure. In the event of a failure, it should take no longer than 15 seconds to re-load the most recent game environment. There should be weekly maintenance to the game's system.

Usability

The game shall be easy to use as in it will be easy for a child of 10 years and anyone above that. There shall be an option for recovering forgotten passwords. The game shall be only in English. The game shall allow the user to personalize their username, and profile space. This game shall be usable by anyone who possesses very basic computer skills.

Supportability

The product shall be able to provide assistance for all users 24/7 through an email automated system. Users shall receive help when asked within 24 hours of request.

Security

There shall be access requirements where only developers have access to the code. Personal information such as email will remain private per user. Only the maintenance team can access the user database. The user database shall never be made public.

Test Plan Summary

Test Level	Start Time	Duration	External Party	Project Team	Business
Unit Testing	3 weeks before each release.	1 week		Primary	
Integration Testing	2 weeks before each release.	1 week		Primary	
User Acceptance Testing	1 week before each release.	1 week		Secondary	Primary
Security Testing	1 week before Global Availability (GA).	1 week	Primary	Secondary	
Product Verification Testing	1 week before each product release.	1 week		Secondary	Primary

Note: Where *primary* and *secondary* in the above table suggest who has Primary or Secondary responsibilities for the particular test level.