Requirements

Cohort 1, Team5:

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Introduction
Our requirements were acquired via Cohort 1 Product Brief - Auber.pdf and our initial client meeting. Most of our requirements came from the brief, the client meeting was used to clarify those requirements and gather new ones.

The brief can be seen as a single statement of need (albeit a long and detailed one).
After the meeting all of the gathered requirements were gathered into an informal requirements document (Similar to user requirements), this document was then formalised and converted to the user requirement table below (shall priority requirements are needed for the game to function, should priority requirements aren't needed for a functional game but greatly improve the game and cause it to fulfil the brief).

These user requirements were then converted into multiple technical and verifiable software requirements (both functional and non-functional).

These software requirements were also classified into basic categories (denoted by the second part of the id) to make requirements related to a single aspect easier to locate.

The tables with the software requirements are over the next few pages.

User Requirements

ID	Description	Priority
UR_OPERATIVES	Game must include 8 operatives who sabotage systems	Shall
UR_SABOTAGE_NOTIFCATION	Player must be notified when a sabotage is attempted (includes location of sabotage)	Should
UR_OPERATIVE_ARREST	Player must have the ability to arrest operatives (and beam them to the brig)	Shall
UR_ROOM_TYPES	There must be at least 4 types of rooms in the station	Should
UR_TELEPORTERS	Rooms can have teleportation pads from which the player (but not infiltrators) can teleport to any other teleportation pad in the station	Should
UR_OPERATIVE_ABILITIES	There must be at least 3 distinct special abilities (which make arresting them harder) within the group of infiltrators	Should
UR_SYSTEMS	There must be at least 15 critical systems, when 15 are destroyed the game is lost	Shall
UR_INFIRMARY	The player can teleport to the infirmary to heal	Should
UR_WIN_CONDITION	The game is won when all eight infiltrators have been arrested	Shall
UR_REAL_TIME	The game must be real-time (not turn-based)	Shall
UR_MULTIPLATFORM	The game must be cross platform and be able to run on many different systems	Should
UR_AUDIENCE	The game must be appropriate and appealing to the intended users (UoY Communications Office + ENG1 peers) (e.g. the game must not include any extreme violence, must have appealing graphics etc.)	Shall
UR_UX	The user interface should be easy and intuitive to navigator	Should

Software and Functional requirements

ID	Description	User requirement
FR_GAME_WIN	When all operatives are arrested the game is won	UR_WIN_CONDITION
FR_GAME_LOSE	When 15 systems are destroyed the game is lost	UR_SYSTEMS
FR_GAME_REALTIME	The game must be a real-time game, not turn based	UR_REALTIME
FR_OPER_NUM	Game must start with 8 AI	UR_OPERATIVES
FR_OPER_ABILITY	At least 3 operatives must have unique useful abilities	UR_OPERATIVE_ABILITIES
FR_OPER_SYSTEM_ATTACK	Operatives must be able to damage/destroy systems	UR_OPERATIVES
FR_PLAYER_HEALTH	Player must have health which can be damaged	UR_INFIRMARY
FR_PLAYER_ARREST	The player must be able to arrest operatives	UR_OPERATIVE_ARREST
FR_PLAYER_HEAL	The player must be able to heal their health	UR_INFIRMARY
FR_PLAYER_TELEPORT	The player must be able to use teleport pads to move between them	UR_TELEPORTERS
FR_PLAYER_NOTIFIED	The player must be notified when a system is under attack	UR_SABOTAGE_NOTIFICATION
FR_PLAYER_SYSTEM_LOCAT ION	The player must know the location of systems (at least when they are attacked)	UR_SABOTAGE_NOTIFICATION
FR_MAP_SYSTEMS	The map must contain at least 15 systems	UR_SYSTEMS
FR_MAP_ROOMS	The map must contain at least 4 room types	UR_ROOM_TYPES
FR_MAP_LAYOUT	All systems on the map must be reachable by operatives (without the use of teleport pads), and thus by the player	UR_SYSTEMS/UR_OPERATIVES/UR_OPE RATIVE_ARREST

FR_MAP_TELEPORTERS	The map must contain at least 2 teleport pads	UR_TELEPORTERS
FR_MAP_INFIRM	The map must contain an infirmary room	UR_INFIRMARY
FR_MAP_INFIRM_TELEPORTER	The infirmary must include a teleport pad	UR_INFIRMARY
FR_MAP_INFIRM_HEAL	The infirmary must contain some way to heal the player	UR_INFIRMARY
FR_SETTING	The user should be able to adjust settings such as sensitivity and controls.	UR_AUDIENCE
FR_DEMO	There should be a demo mode where the game plays itself to show the user how the game works.	UR_UX

Non-Functional requirements

ID	Description	Fit criteria	User requirement
NFR_PLAYABILITY_FRAMES	The game should run at a high enough framerate to not impede gameplay	Game frame rate is always >25fps	UR_AUDIENCE
NFR_PLAYABLITY_INSTRUCTIONS	A new player, with minimum prior knowledge, must understand the objectives and controls of the game quickly (be able to attempt to play)	95% of players will be able to teleport, heal their health and arrest operatives with 1 minute of instructions.	UR_UX
NFR_APPROPRIATE	The game should be suitable for use at open days and UCAS days by the UoY communication office	Game must be appropriate for at most a PEGI 12 rating	UR_AUDIENCE
NFR_PLATFORMS	The game must run on the platforms required by the client and UoY communication office	A runnable version must be producible for Windows, MacOs, Android, and Linux (at least)	UR_MULTIPLATFORM
NFR_SCALABLE	The games UI must be scalable (set to different resolutions)	The game window scale down to a screen of 1x1 pixels.	UR_UX