Commitment Document for “SimFortress”

Product Backlog

Total budget: 432h

Priorities: Must - Should - Could

Feature ID	Feature Name	Description	Priority	Effort Estimate
F1	Simulate 5G Base Station (basic)	Connect/Disconnect to UEs, status (up/down), single BS to start	Must	20
F2	SCADA HMI (basic)	View tower, turn on/off	Must	10
F3	Simulate User Equipment (basic)	Simpe UEs connect to BSs	Must	10
F4	Simulate Base Station SCADA	SCADA server communicates with BSs with industrial protocol	Must	80

F5	Dashboard Map of Base Stations	Map showing towers, status, and radius	Should	30
F6	View All Base Stations' Info	List general info, (up/down), nr connected UEs	Should	10
F7	HMI (advanced)	PLC controllers for antenna, transmitters, etc.	Must	30
F8	Simulate 5G Base Station (advanced)	Tower has antenna, amplifier, etc.	Must	50
F9	Notifications (log)	Notification on dashboard on BS events	Could	20
F10	Add Base Station from Dashboard	Customize BS placement on map	Bonus	N/A
F11	Launch Attack on SCADA Server	Attack SCADA to gain access and control BS	Must	100
F12	Simulation Dashboard (basic)	GUI for simulation, information, and HMI	Must	25
F13	Simulation Dashboard (advanced)	More user friendly, prettier, and more options in GUI	Should	40

Technical Solution

Backend programming language: Python

Frontend: HTML/CSS

Frameworks: Python Flask

Wireless network simulator for simulating 5G

ConPot for SCADA simulation

Product Acceptance Criteria

The SimFortress project will be considered accepted when all the specified features and functionalities, as outlined in the product backlog, have been successfully implemented and tested. The system must demonstrate reliability, stability, and security, ensuring that it operates smoothly under various usage scenarios and conditions. Acceptance will be granted when all features are fully functional as intended and the system is deemed ready for production use.