PROSTHETIC DATABASE

USER STORIES:

Targets: Patients, Surgeon, Biomedical engineer.

Template:

- As a Patient, I want to receive surgery to prepare my limb for the prosthetic.
- As a Patient that has lost a limb in an accident, I want a biomedical engineer to create a prosthetic that fulfils my needs.
- As a Surgeon that Works in a hospital I want to access to the information of my patients
- As a Company I want to know what patients haven't received their prosthetic.
- As a manager I want to be able to hire and fire employees.

USE CASES:

1. **SCHEDULE THE SURGERY:**

Actor: Surgeon

Goal: arrange a date for the surgery

Description: set up a date for the surgery.

Preconditions: 1) The date is available

Standard scenario: date is assigned to the patient.

Alternate scenario: -

Trigger: mark date as unavailable

2. **REPORT SURGERY:**

Actor: Patient

Goal: Know if the surgery has been completed

Description: The state of the surgery is shown

Precondition: 1) the surgery is correct 2) the surgery has been done

Standard path: The date is correct. The patient's data is correct.

Alternate scenarios: (something happened at the hospital and the surgeon is not available)

3. **CREATE PROSTHETIC:**

Actor: Biomedical Engineer

Goal: produce the desired prosthetic

Description: Biomedical Engineer designs and creates the prosthetic

Precondition: (Fulfil patient's needs) 1) Prosthetic can be made 2) Prosthetic is demanded

Standard Scenarios: the prosthetics are wanted. The prosthetics are available.

4. **REPORT DELIVERY OF PROSTHETIC:**

Actor: Patient

Goal: receive the wanted prosthetic

Description: patient receives the prosthetics

Precondition: 1) Prosthetic has been produced

Standard scenario: The prosthetic is given to the patient.

5. **CHECK DEMAND:**

Actor: Biomedical Engineer

Goal: know which prosthetic is more required.

Description: check a list of the prosthetics needed

Precondition: 1) Patients that have received surgery

Standard scenario: There's a list of patients with requires

6. **DELETE COMPANY:**

Actor: Manager

Goal: Delete an existing company.

Description: A manager deletes a company

Precondition: The company you want to delete exists

Standard scenario: A company wants to be deleted

7. **DELETE SURGEON:**

Actor: Manager

Goal: Delete an existing surgeon.

Description: A manager deletes a surgeon

Precondition: 1) The surgeon you want to delete exists

Standard scenario: A surgeon wants to be deleted

8. **ADD SURGEON:**

Actor: Manager

Goal: Create a new surgeon.

Description: A new surgeon is created

Precondition: 1) The surgeon that you want to add does not exist

Standard scenario: You have a list of surgeons, and you want to add a new one

9. **ADD COMPANY:**

Actor: Manager

Goal: Create a new company.

Description: A new company is created

Precondition: 1) the company that you want to add does not exist

Standard scenario: You have a list of companies, and you want to add a new one

10. **SIGN UP:**

Actor: User

Goal: Enter the database

Description: Make a new account

Precondition: The account you are creating does not exist

Standard scenario: You create a password and a user

11. **LOG IN:**

Actor: User

Goal: Enter into your profile

Description: You enter as the actor you are

Precondition: The user exists, the information is correctly written

Standard scenario: You have a user, and you enter the database

12. **REGISTER PATIENT:**

Actor: Surgeon

Goal: Add a new patient.

Description: A new patient is added

Precondition: Information about a new patient can be inserted

Standard scenario: There's a list of patients and you want to add information about a new one

13. **INPUT NEEDS:**

Actor: Surgeon

Goal: Register the need of the patient

Description: You want to insert the patient need

Precondition: A patient has a need, a need can be added to a patient

Standard scenario: A patient has a specific need.

14. **LEAVE APP:**

Actor: User

Goal: exit the database

Description: Close your profile

Precondition: A user can leave the database

Standard scenario: You have entered before and know you want to leave

15. **INPUT OPTION:**

Actor: Patient

Goal: You want to register the options you want

Description: You insert your preferences

Precondition: Options can be specified

Standard scenario: You have preferences that need to be specified

16. **CHECK THE NEEDS:**

Actor: Company

Goal: See the patient needs

Description: You enter the patient profile to see the needs

Precondition: patient has needs, patient information can be seen

Standard scenario: You need to see the needs of the patient

17. **ADD MATERIAL:**

Actor: Company

Goal: Add a material to a prosthetic

Description: You enter the material of the prosthetic

Precondition: prosthetic has material

Standard scenario: A prosthetic is going to be made of a specific material

REQUIREMENTS LIST:

Functional:

- A patient can be register.
- Report surgery has been done.
- A date can be scheduled.
- Check if a patient is registered.
- Surgeon is available
- Materials are available
- Know the type of prosthetic
- Check the demand
- Check if prosthetic has been created

- Check if the prosthetic has been delivered
- The patient registers the needs
- A engineer checks the needs of the patients
- Get needs by type
- Get need
- Get prosthetic by need
- Search prosthetic by patient
- Get option by type
- Get option
- Get patient by id
- Get patient by name
- Find prosthetic by need
- Search prosthetic by patient
- Get surgeon by surgery
- Search surgery by patient
- Search surgery by date
- Search surgery by surgeon
- Get surgeons
- Get companies

Non-functional:

- System is programmed in Java.
- The system checks if the patient's data is correct.
- The system checks the demand of the prosthetics.

REQUIREMENTS TABLE:

REQ. 1 : A patient can be register	
REQ. 2: Report surgery has been done	
REQ. 3: A date can be scheduled	
REQ. 4: Check if a patient is registered	
REQ. 5: Surgeon is available	
REQ. 6: Materials are available	N.F.REQ. 1: System is programmed in java
REQ. 7: Know the type of prosthetic	N.F.REQ. 2: The system checks if the patient´s data is correct
REQ. 8: Check the demand	N.F.REQ. 3: the system checks the demand of the prosthetics
REQ. 9: Check if prosthetic has been created	
REQ. 10: Check if the prosthetic has ben delivered	
REQ. 11: The patient register the needs	
REQ. 12: A engineer checks the needs of the patient	
REQ. 13: Get needs by type	
REQ. 14: Get needs	
REQ. 15: Get prosthetic by need	
REQ. 16: Search prosthetic by patient	
REQ. 17: Get option by type	
REQ. 18: Get option	
REQ. 19: Get patient by id	
REQ. 20: Get patient by name	
REQ. 21: Find prosthetic by patient	
REQ. 22: Search prosthetic by patient	
REQ. 23: Get surgeon by surgery	
REQ. 24: Search surgery by patient	
REQ. 25: Search surgery by date	
REQ. 26: Search surgery by surgeon	
REQ. 27: Get surgeons	
REQ. 28: Get companies	

	REQ. 1	REQ.2	REQ.3	REQ.4	REQ. 5	REQ. 6	REQ. 7	REQ. 8	REQ. 9	REQ. 10	REQ. 11	REQ. 12	REQ. 13	REQ. 14	REQ. 15
Check the needs										X	X	X	X	X	X
Schedule the surgery			X	X	X										
Report surgery		X	X		X										
Create prosthetic		X				X	X	X		X	X	X	X	X	
Report delivery of prosthetic									X	X					
Register patient	X														
Input needs											X	X	X	X	
Check demand							X	X							X
Delete company															
Delete surgeon					X										
Add surgeon					X										
Add company															
Sign up															
Log in															
Leave app															

REQ. 16	REQ. 17	REQ. 18	REQ. 19	REQ. 20	REQ. 21	REQ. 22	REQ. 23	REQ. 24	REQ. 25	REQ. 26	REQ. 27	REQ. 28	N.F.REQ.1	N.F.REQ.2	N.F.REQ.3
													x		
									x				x	x	
						x	x	x	x	x			x	x	
					x								x		
													x		
			x	x	x										
x	x	x			x								x		x
												x			
											x				
						x	x	x	x	x	x				
												x			

SYSTEM INTENT:

Our system is going to be for those patients in need of a prosthetic after a limb loss. The process would start by checking the needs of the patient in order to know a prosthetic that suits the patient. Afterwards, the surgeon schedules a date for the surgery. Once the date has been settled the patient will receive the surgery. At the same time, the company checks the demand and creates the prosthetics. Finally, when the prosthetic has been made, it will be delivered to the patient. While this is happening an external manager will be in charge of adding and deleting companies and surgeons from the database as well as seeing the information about them all.