**Assignment 1**

**CCAS.4.3**

**Seif Kamaleldin**

**202101838**

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| **Functional** | | | |
| **ID** | **Requirement** | **Category** | **Justification** |
| ***FCR01*** | Patients’ personal information must be stored in the database | Must Have | To manipulate and edit through the patients’ data |
| ***FCR02*** | Patients’ medical history must be stored in the database | Must Have | To allow correct diagnosis and prediction for future health risks |
| ***FCR03*** | Patients’ payment or insurance details must be stored in the database | Should Have | To ensure a smooth payment claiming and for guarantee from the clinic’s side |
| ***FCR04*** | The database should contain the patient’s appointments timings | Should Have | To ensure no clashes the timings and ensure smooth scheduling |
| ***FCR05*** | Doctors’ profile , degree and specialization must be stored in the database | Must Have | To ease the appointments reservations with clear doctor information displayed and to ensure availability |
| ***FCR06*** | The database should store digital imaging files like X-rays and MRIs | Must Have | Important to have a complete medical record for easier diagnosing |
| ***FCR07*** | The database could track the patients’ loyalty programs if available | Could Have | To advertise for the clinic and to encourage more patients to do annual or monthly checkups |
| ***FCR08*** | Patients’ treatment plan must be saved in the database | Must Have | To ensure that no medicine could have any chemicals that is within the patient’s allergies list and for the follow-up visits |
| ***FCR09*** | The database backup is an essential element in any successful software | Must Have | Necessary for data recovery and for data loss avoidance |
| ***FCR10*** | The database must support multiple user roles like doctors , receptionist , admins and etc…. | Must Have | Different users have different data , authentication and authorities in the system |
| ***FCR11*** | The database can have an integration with the government prescription needed medicines | Could Have | To ensure that the patient will purchase the medicine from the pharmacy without any dilemmas |
| ***FCR12*** | The database should allow the scheduling of follow-up visits | Should Have | Help to ensure the great service to patients |
| ***FCR13*** | The database must contain the audits log of all the admins | Must Have | The admins with different levels of authorities must be known on which user did they edit and when |
| ***FCR14*** | The database can have a section for the patient’s feedback and reviews | Could Have | To have a complete vision om what to enhance and for a better patient satisfaction |
| ***FCR15*** | The database could allow the patients to request appointments online | Could Have | For better user experience and easier access |
| ***FCR16*** | The database must support archiving of inactive patient records | Must Have | Helps optimize database performance by archiving patients who are no longer active. |
| ***FCR17*** | The database could integrate with wearable devices for patient health monitoring | Could Have | Facilitates real-time health data input from patient wearables for chronic conditions. |
| ***FCR18*** | The doctors’ requests from the patients for the next visit like x-rays for example should be saved in the database | Should Have | This allows the patient to |
| ***FCR19*** | The database could have the doctors’ reviews from past patients | Could Have | For the patient to choose the doctor that is suitable for him/her |
| ***FCR20*** | The database must support data import/export functionalities | Must Have | Allows easy transfer of patient data between systems and backups. |

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| **Non-Functional** | | | |
| **ID** | **Requirement** | **Category** | **Justification** |
| ***NFCR01*** | The database should be generic and scalable | Must Have | To allow easier addition of new diagnosis , diseases or medicine |
| ***NFCR02*** | The databases must encrypt all the sensitive patients’ information | Must Have | This is because patient’s data must be extremely confidential |
| ***NFCR03*** | The database should support logging and real-time monitoring | Should Have | Enables the clinic to monitor system performance |
| ***NFCR04*** | The database must be auditable, with logs stored for at least 7 years | Must Have | Ensures legal and operational accountability by keeping long-term audit logs. |
| ***NFCR05*** | The database could support offline access with synchronization capabilities | Could Have | Allows clinic staff to access patient data during internet outages or in remote locations, with data synced back to the main database once connectivity is restored |