**Project Proposal**

Problem Statement:

Although there are advancements in the healthcare field, still there are loopholes when providing the treatment to patients. Doctor should know his complete medical history to provide him appropriate medication with all his on-going medications and allegories.

Secondly there is no means of communication on drug reactions and side effects between the pharmaceutical company and the doctors/patients. This increases risk to patients.

Thirdly Pharmaceutical company should sell those drug which are approved by the FDA(Food and Drug Administrator) which outweighs the risk over benefits of the drug.m

Assumptions:

1. All the hospitals across the world are leveraging the same healthcare system.
2. Ecosystem model will be implemented country wise along with their states.
3. One doctor is affiliated to only one hospital .
4. Patient are reporting their feedbacks to FDA through doctor and pharmacist.
5. Patient account is created by Doctor for the 1st time.
6. International privacy laws are not enacted.
7. Patient are able to see other progress if they accept to enroll into social network. Hence privacy is not violated.
8. Patient is assigned one primary doctor and that doctor will maintain its completes history.
9. Pharmacy have ordered the drug from manufacture which are only approved.

Implementation**:** Problem Solving

1. **Patient-Centric Model :** Leveraging the same health care model restricts patient entry more than once in the system. Patient details can be acquired with all its medication, allergy and encounter details.
2. **Drug Safety** : System allows patients to share their experience to the doctor(Positive/Negative). Doctor indeed with work with pharmacy to get the manufacturer of the drug and provide him the feedback provided by patient regarding the side-effects cause due to the drug. This would help to identify the patterns , analyze and ultimately mitigate the risk by calling back a product if it’s found to be detrimental due to patient’s health.
3. **Patient to patient Interaction :** patient portal has been created which helps to interact the patients and share their benefits.
4. There will 4 enterprises listed as below
   1. Hospital
   2. Pharmaceutical companies
   3. Pharmacy
   4. FDA
5. **Hospital Enterprise:** There is collection of organizations listed below
   1. **Doctor Organization :**

* Doctor Register the patients for the 1st time.
* This organizations will help to diagnos , assess and treat the patients.
* They provides medication to patient.
* They communicate to pharmacy and provide them order of the prescription given to the patient.
* They communicate with FDA to provide patients feedback about the drug.
* They can sell only approved drug’s by FDA.
  1. **Nurse Organization :**
* This Organization helps to carry out the Vital Signs of the patients and setup the
* This Organization receives work request from Doctors to process the Patient’s test.
  1. **Lab Assistant Organization**
* This Organization receives work request from Doctors to process the Patient’s test.
* It performs all the required test and generated a report for the patient.
* Hence Doctor will able to diagnose the patient after viewing the reports.

1. **Pharmaceutical Companies Enterprise** : There is collection of organizations listed below
   1. **Manufacturer organization :**

* This Organization creates the drug and its description to the list of drugs.
* It also provides the medication guide for the each drug.
* This Organization keeps track of the feedback received from FDA and analyze the results.
* This will be helpful to see which drug has higher side-effects and callback of the product in case of serious threat.

1. **Pharmacy Enterprise :**
   1. **TechnicalPharmacistOrganization:**

* This takes the request from doctor/patient about the prescriptions and provide the drug to the patient after verification with the doctor.
* This keeps record of the drug along with its manufacture.
* In case of call back product , all the drugs are shipped back to the pharmacy.

1. **FDA Enterprise :**
   1. **AuthorityFDAManager Organization:**

* It gets the request from the Manufacture for the drug approval.
* It goes through the REMS (Risk Evaluation and Mitigation System) report and analyse the report and approve/reject based on the benefits and side effects.
* It gets the report from the doctor and based on the feedback it analyse the evaluate it.
* If reports to manufacture in case of adverse events and ask him to call back of products if required.
* It has a list of suspicious product and analyse it though BI(graph) which will secure patients life from adverse side effects.