**A PROJECT ABOUT EMERGENCY MEDICINE AND DOCTOR SERVICES**

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| **Motivation:** People who are from remote areas are deprived from proper treatment facilities. For this reason they need to go to Dhaka city for getting better treatment, which are so much painful and also expensive. One the other hand, during emergency situation its became very pathetic for them to collect necessary medicines. Using technology and internet this system will be helpful to get proper treatment and get to collect necessary medicines.  **Objective: The goal of the project is to provide proper medicine and medical services through online for remote area.**  **Critical Challenges:** Working with the medicine company and doctors will be a critical challenges.  **Conflicting requirements:** Without seeing the patient, prescribe a prescription can be risky for doctors. That is why they will hesitate to work. Thus, managing the doctors will be one of the most critical challenges. | figure-1.PNG  **Figure : Bagarchar UP Health Center**  -Various problems forced the Bagarchar UP Health Center to shut its services for more than five years at Bakashiganj Upazila in Jamalpur. As a result, the local patients have to go to the 12-kilometer-away government and private hospitals of the Upazila and district.  **Source :** <https://www.daily-bangladesh.com/english/No-healthcare-services-for-5-years-in-Bagarchar-UP/53100> - 04:10 PM, 8 November 2020 |

**Some components of Complex Engineering Problem:**

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| **Knowledge Profile (K)** |
| **K1** – natural sciences |
| **K2** – mathematics |
| **K3** – engineering fundamentals |
| **K4** – specialist knowledge |
| **K5** – engineering design |
| **K6** – engineering practice |
| **K7** – comprehension |
| **K8** – research literature |

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| **Attribute** | **P1 and some or all of P2 to P7:** |
| Depth of knowledge required | **P1:** one or more of K3, K4, K5, K6 or K8 |
| Range of conflicting requirements | **P2:** wide-ranging or conflicting technical, engineering and other issues |
| Depth of analysis required | **P3:** no obvious solution |
| Familiarity of issues | **P4:** Involve infrequently encountered issues |
| Extent of applicable codes | **P5:** outside problems encompassed by standards and codes of practice |
| Extent of stake-holder involvement and conflicting requirements | **P6:** diverse groups of stakeholders with widely varying needs |
| Interdependence | **P7:** many component parts or sub-problems |

**Let’s explore how a few P’s could be addressed through this project:**

**P1** (***Depth of knowledge required- one or more of K3, K4, K5, K6 or K8***): This project generally requires a study of similar work with the same purpose as ours (K8 – Research Literature), Design the program for system(k5 - engineering design), We must need some medicine knowledge, and medical knowledge (K4 – Specialist Knowledge), Developing an App for this project (K6 – Engineering Practice).

**P2 *(Range of conflicting requirements):*** Data Analysis with proper regularization, while limited real data is available, will be create a Conflict for this project.

**P6** (***Extent of stake-holder involvement and conflicting requirements- diverse groups of stakeholders with widely varying needs***): Various groups of stakeholders also medicine stores can be benefited from this project.

**P7 (*Interdependence- many component parts or sub-problems*):** This project involves three subsystems mainly:

1. Application model.

**List of activities (As):**

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| **Attribute** | **Some or all of the following:** |
| Range of resources | **A1:** use of diverse resources (include people, money, equipment, materials, information and technologies) |
| Level of interaction | **A2:** resolution of significant problems arising from interactions between wide-ranging or conflicting technical, engineering or other issues |
| Innovation | **A3:** creative use of engineering principles and research based knowledge in novel ways |
| Consequences for society and the environment | **A4:** consequences in a range of contexts, characterized by difficulty of prediction and mitigation |
| Familiarity | **A5:** Can extend beyond previous experiences by applying principles-based approaches |

**Let’s explore how a few A’s could be addressed through this project:**

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| **Attribute** | **Some or all of the following** |
| **Range of resources** | **A1 (*Range of resources*):** This plan will require the collaboration of various organizations including people (survey), finance (consideration of project creation), information and technology. |
| **Level of interaction** | **A2 (*Level of interaction):*** A good level of interaction with the doctors, pharmacists and the faculty members of pharmacy departments is very important. |
| **Familiarity** | **A5 (*Familiarity*):** Solving a medical-related problem will be a challenge for CSE students. |