

PROBLEM STATEMENT



PROBLEM STATEMENT DETAILS

Problem Statement ID	1492
Problem Statement Title	Student Innovation
Description	Cutting-edge technology in these sectors continues to be in demand. Recent shifts in healthcare trends, growing populations also present an array of opportunities for innovation.
Organization	AICTE, MIC-Student Innovation
Category	Software
Domain Bucket	MedTech / BioTech / HealthTech
Youtube Link	
Dataset Link	NA

DATABASE

+ Symptoms Dataset

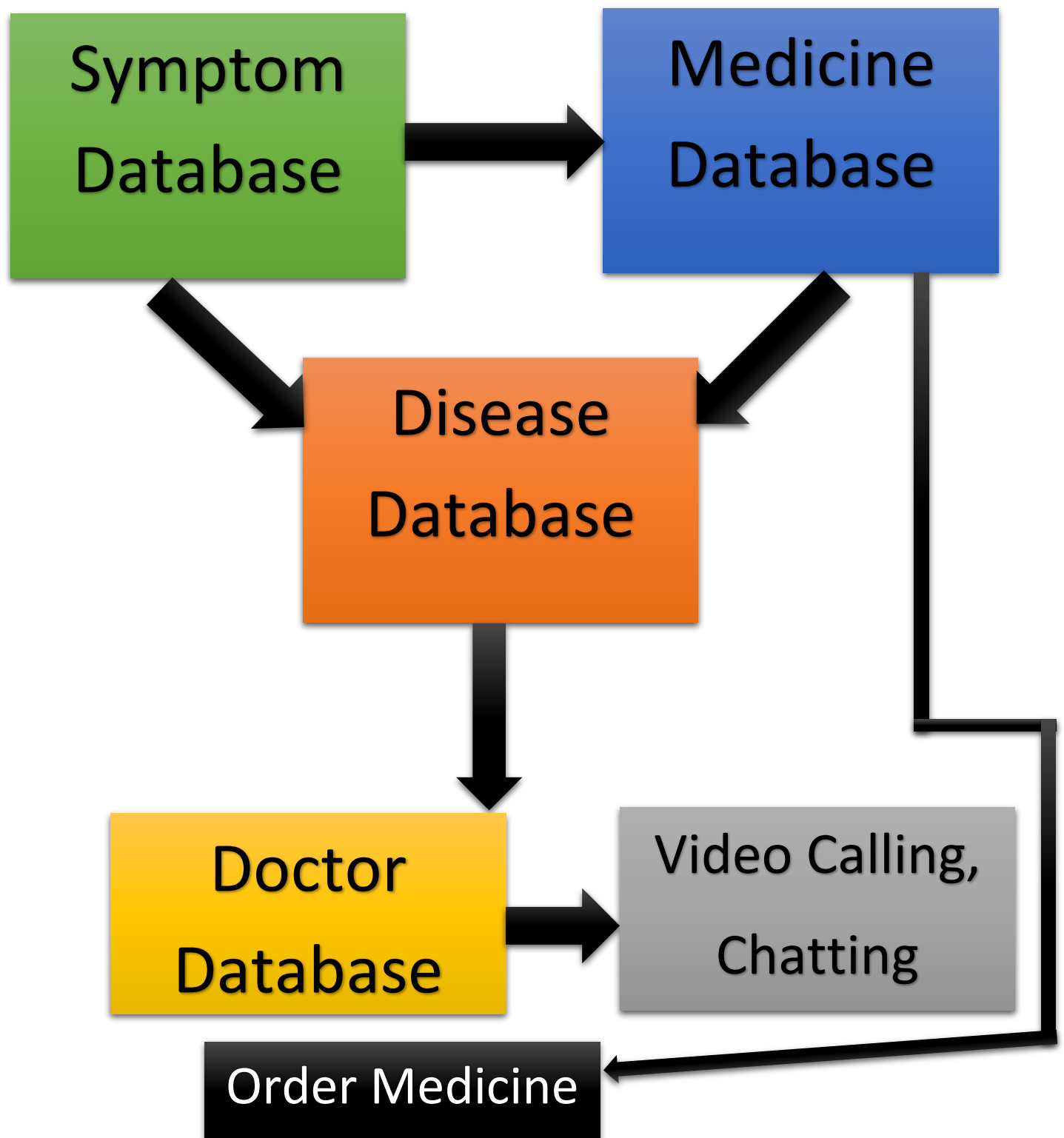
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      {
        "val": "3 days - 2 weeks",
        "medicine": "Pyrazinamide",
        "disease": "TB"
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    "symptoms": "cough",
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        "disease": ""
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        "val": "3 days - 2 weeks",
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        "disease": "Asthma"
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+ Medicines Dataset

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[
  {
    "medicine": "Paracetamol",
    "composition": "The active ingredient in Paracetamol is acetaminophen.",
    "usage": "Paracetamol is commonly used to reduce pain and fever. It can be taken orally in tablet or liquid form. The dosage depends on age and body weight, and it should be taken as directed by a healthcare professional or according to the instructions on the packaging. It's important not to exceed the recommended dosage, as excessive use can lead to liver damage."
  },
  {
    "medicine": "Pyrazinamide",
    "composition": "Pyrazinamide is the active ingredient in this medicine.",
    "usage": "Pyrazinamide is primarily used in the treatment of tuberculosis (TB). It is part of a combination therapy along with other anti-TB drugs. The dosage and duration of treatment with Pyrazinamide should be determined by a healthcare professional. Patients should take this medicine as prescribed and follow the full course of treatment to effectively treat TB."
  },
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    "medicine": "Cough suppressants",
    "composition": "Cough suppressants can contain various active ingredients, such as dextromethorphan or codeine.",
    "usage": "Cough suppressants are used to relieve coughing by suppressing the cough reflex. The specific usage and dosage may vary depending on the active ingredient and the product. It's important to follow the instructions on the packaging or as advised by a healthcare provider. Some cough suppressants may cause drowsiness, so it's important to use them with caution, especially if driving or operating machinery."
  }
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+ Diseases Dataset

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[
  {
    "name": "TB",
    "desc": "1. Transmission: TB is primarily transmitted through the air when an infected person with active TB in their lungs coughs or sneezes. People nearby can inhale the bacteria and become infected.\n2. Types of TB: Latent TB Infection (LTBI): In LTBI, the bacteria are present in the body but are not causing active disease. People with LTBI do not feel sick and cannot spread TB to others. However, they are at risk of developing active TB in the future if their immune system weakens. Active TB Disease: In active TB disease, the bacteria are actively multiplying in the body, causing symptoms. Active TB can affect the lungs (pulmonary TB) or other parts of the body (extrapulmonary TB).\n3. Symptoms of Pulmonary TB: Persistent cough that lasts three weeks or more Chest pain Coughing up blood or sputum Fatigue Fever Night sweats Unintended weight loss\n4. Diagnosis: TB is diagnosed through a combination of medical history, physical examination, chest X-rays, and laboratory tests, including sputum smear microscopy and culture. Testing for latent TB infection (LTBI) can be done through the tuberculin skin test (TST) or the interferon-gamma release assay (IGRA) blood test.\n5. Treatment: TB is treatable with a combination of antibiotics. The standard treatment is a course of antibiotics taken over several months to ensure complete eradication of the bacteria. Commonly used TB drugs include isoniazid, rifampin, ethambutol, and pyrazinamide.\nTB remains a major global health concern, with millions of new cases and deaths reported each year. Efforts to control and eliminate TB include improved diagnostics, better access to treatment, and public health measures."
  },
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    "name": "Asthma",
    "desc": "1. Causes and Triggers:\n\nAsthma is often caused by a combination of genetic and environmental factors. Common triggers for asthma symptoms include allergens (such as pollen, dust mites, and pet dander), respiratory infections, cold air, smoke, strong odors, exercise (exercise-induced bronchoconstriction), and stress.\n\n2. Symptoms:\n\nWheezing: A high-pitched whistling sound when breathing. Shortness of breath: Difficulty in breathing and feeling like you can't catch your breath. Chest tightness: A sensation of pressure or discomfort in the chest. Coughing, especially at night or early in the morning.\n\n3. Diagnosis:\n\nAsthma is typically diagnosed through a combination of medical history, physical examination, lung function tests (spirometry), and sometimes allergy testing. Your healthcare provider may ask about your symptoms, family history, and potential triggers to make an accurate diagnosis.\n\n4. Treatment:\n\nAsthma is a chronic condition, but it can be managed effectively with proper treatment. The primary goals of asthma treatment are to control symptoms, prevent exacerbations, and maintain good lung function. Treatment often includes the use of asthma medications, which can be divided into two main categories:\n\nController Medications: These are taken regularly to prevent asthma symptoms. They include inhaled corticosteroids, long-acting beta-agonists, leukotriene modifiers, and others. Quick-Relief (Rescue) Medications: These are used during asthma attacks to provide immediate relief. They typically include short-acting beta-agonists (e.g., albuterol).\n\n5. Asthma Action Plan:\n\nPeople with asthma should work with their healthcare providers to develop an asthma action plan. This plan outlines how to manage asthma on a day-to-day basis and what steps to take in case of worsening symptoms or an asthma attack.\n\n6. Lifestyle Management:\n\nAsthma management also involves identifying and avoiding asthma triggers, such as allergens or irritants. Maintaining good overall health through regular exercise, a balanced diet, and stress management can also help control asthma.\n\n7. Emergency Care:\n\nSevere asthma attacks require immediate medical attention. Signs of a severe attack include extreme difficulty breathing, little or no improvement with rescue inhalers, and a bluish tint to the lips or fingernails."
  }
]
```



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GitHub - <https://github.com/medtech2002>

/* If you want to create any other account for a different work purpose, you should use the provided email ID and password. */