15 Day Report Part-2

1. **What tools are you using for making the project for example: eclipse, jframe, etc?**

For our project, we are using different tools to achieve efficiency as well as reliability. **Eclipse** is our main **Integrated Development Environment (IDE)**, which is quite efficient and provides all the necessary functionalities required for coding and debugging. We're using **Java Swing** to build our project's GUI, employing **JFrame**, **JPanel**, and **JScrollPane** functionalities to ensure an interactive and user-friendly interface..Together, these tools make the development processes more effective and faster, which helps us in achieving our project's objectives precisely and with clarity.

2. **Have you made any changes to the data structure you have selected? If yes then why?**

No,we haven't made any changes to the data structures that we had selected.We decided on implementing trees as they provide a hierarchical structure that facilitates efficient data storage and retrieval of medical information.

3. **What is the progress of your project? What all have you accomplished in these 2 weeks?**

During the last two weeks, we made significant progress on the project.

1. We focused on coding the entire medical diagnosis system for various diseases by creating the main root node and its respective leaf nodes as per the interlinking of the symptoms.We also made sure that each disease has its associated **probabilities** based on the accuracy of symptoms.

2.Next, we went over learning **Java Swing**, to make a graphical user interface for our project, wherein we generate personalized medical reports for the users for their comprehensive assistance. This learning process helped us in understanding the interlinking of the **GUI interface** with the console based environment.

With this combined strategy, we have been able to develop a **robust and reliable** platform to get the best user experience and provide them with accurate medical diagnosis.Looking ahead, we plan to improve our platform with added features to ensure highly accurate medical diagnoses.

4. Did you face any problems in these 15 days and were you able to resolve them?

Firstly, we faced the problem of writing and implementing **clean code**.Initially we had decided upon naming the nodes as continuous combination of "yes" and "no" so as to help us create the question nodes for the symptoms(eg: yes.no.no.noNode).However,during this period we realized that this style will be difficult to manage and in order to maintain a clean code structure we devised a more efficient solution:naming the node as per the symptom while framing the question(eg:coughNode instead of yes.no.no.noNode).

Secondly, we faced difficulty in integrating the java swing application with our console based environment.We solved this problem by utilising the **swing functionalities(like SwingUtilities)** for user interaction while maintaining the backend logic.This represented the exact changes which transformed our process into simple and meaningful, and this is how we have successfully overcome the challenges starting from the initial development phase.

5. Is the mentor helping you as and when required?

Yes, our mentor Gaurika Gupta is always there for us when we need help and she is really nice and understanding about it. She is kind and considerate, and whenever we reach out, she is always ready to assist us. Her support makes it easier for us to work on the project and tackle any challenges that come our way. Having her guidance has been a big help in moving forward with our work smoothly and confidently.

6. How have the discussions with your mentor helped you?

Yes, our mentor is definitely helping us as and when required. She has been incredibly helpful throughout our project journey. From deciding on the basic data structures to helping us plan the execution of our project, our mentor has provided us with invaluable guidance. She emphasized the importance of mapping out a basic tree structure on paper first and then diving into the coding phase of our project, which helped us clarify our project's direction and problem statement and understand the overall flow control. Her insights and support have been instrumental in shaping our project approach and ensuring we're on the right track.