* **Project Name: Stock Trend Prediction using LSTM Model**
* **Team Members:**

Souvik Dutta (roll 05)

Arunima Basu(Roll 26)

Diganta Mahanta(Roll 07)

* **Softwares used:** Anacona(Jupyter notebook),VS code,Command Prompt
* **Technologies used:**

BACKEND:

i)Basic Python

ii)Deep Learning Model-Long Short Term Memory

FRONTEND:

iii)Streamlit

* **Objective:** The objective is to predict the upcoming stock trend of any corporation in our web app by using their stock ticker in order to make more accurate decisions.
* **Detailed information:** We have done the model training part in Jupyter notebook. Firstly we have collected the dataset of YAHOO FINANCE from the Internet by using their stock ticker META. We have used “pandas.datareader” to fetch the dataset of any corporarion by using their stock ticker.Then we have filtered & plotted rolling mean of desired columns of the dataset using “matplotlib.pyplot”. After completion of the above mentioned step,we have splitted the dataset in 70:30 manner as Training & Testing part.Then we have installed all the necessary libraries (LSTM,keras,dropout etc) to get started with our deep learning (LSTM) model. We have trained our model in 50 epochs,calculated the loss. After that we have applied our model in the unseen test dataset part, calculated the accuracy(70% approx),saved the progress.

We have then build our own web app “Stock Trend Prediction” using Streamlit in VS code.

Atlast we have runned our web app in command prompt by using “Streamlit run filename.py”.

* **Advantages:**

1. our web app is **user friendly & easy to use.**User just have to copy the stock ticker of any corporation from google & paste it into our web app to see the predicted outcomes.
2. As we have used LSTM model,so user can get more **accurate predictions.**
3. One willing to buy stocks of certain corporations but not sure about that,can use our web app to have a clear vision of the previous ups and downs of the corporation in our final stock trend graph & take the decision wheather he/she should invest into that company or not.

* **Disadvantages:**

1. LSTM model takes longer time to train.
2. We could have used HTML/CSS to get more attractive view of our web app.