Project Development Phase
Model Performance Test

Date	
Team ID	592000
Project Name	Project – T20-Totalitarian:Mastering score predictions
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Metrics	**Regression Model:** **1.Decesion tree regressor** MAE – 4.137309897781102 MSE --137.6454437796061 RMSE -- 11.732239504016533 **2.Linear Regression-** MAE-13.231253750636858 MSE-311.2042685497275 RMSE-17.64098264127391 **3.Random Forest-** MAE- 4.5038041368379815 MSE-59.72223492599992 RMSE-7.7280162348431904 **4.KNeighborsRegressor** MAE-7.7280162348431904 MSE-203.2539267015707 RMSE14.256715144154725	1. ---- Decision Tree Regressor - Model Evaluation ---- Mean Absolute Error (MAE): 4.137309897781102 Mean Squared Error (MSE): 137.6454437796061 Root Mean Squared Error (RMSE): 11.732239504016533 2. ---- Linear Regression - Model Evaluation ---- Mean Absolute Error (MAE): 13.231253750636858 Mean Squared Error (MSE): 311.2042685497275 Root Mean Squared Error (RMSE): 17.64098264127391 3. ---- Random Forest Regression - Model Evaluation ---- Mean Absolute Error (MAE): 4.5038041368379815 Mean Squared Error (MSE): 59.72223492599992 Root Mean Squared Error (RMSE): 7.7280162348431904 4. ---- KNR - Model Evaluation ---- Mean Absolute Error (MAE): 9.900349040139616 Mean Squared Error (MSE): 203.2539267015707 Root Mean Squared Error (RMSE): 14.256715144154725
2.	Tune the Model	Hyperparameter Tuning – MAE-14.763365662866732 MSE-383.20455178342854 RMSE-19.57561114712459 Validation Method – SVM-SUPPORT VECTOR MACHINE	1. ---- Support Vector Regression - Model Evaluation ---- Mean Absolute Error (MAE): 14.763365662866732 Mean Squared Error (MSE): 383.20455178342854 Root Mean Squared Error (RMSE): 19.57561114712459