**Model Development Phase Template**

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| Date | 15 March 2024 |
| Team ID | 739885 |
| Project Title | Golden Harvest: A predictive Model for apple quality assurance |
| Maximum Marks | 6 Marks |

**Model Selection Report**

In the forthcoming Model Selection Report, various models will be outlined, detailing their descriptions, hyperparameters, and performance metrics, including Accuracy or F1 Score. This comprehensive report will provide insights into the chosen models and their effectiveness.

**Model Selection Report:**

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| **Model** | **Description** | **Hyperparameters** | **Performance Metric (e.g., Accuracy, F1 Score)** |
| Decision Tree | Simple tree structure; interpretable, captures non-linear relationships, suitable for initial insights in predicting the bankrupted business | - | Accuracy Score=80% |
| Random Forest | Ensemble of decision trees; robust, handles complex relationships, reduces overfitting, and provides feature importance for predicting the bankrupted business | - | Accuracy Score=91% |
| XGB | It's a machine learning technique that builds an ensemble of decision trees sequentially, where each subsequent tree corrects the errors made by the previous ones. | **-** | Accuracy score=90% |
| Logistic regression | Logistic regression is a statistical model used for binary classification tasks. It predicts the probability of occurrence of an event by fitting data to a logistic curve. | **-** | **Accuracy score=75%** |