**Model Development Phase Template**

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| Date | 20 July 2025 |
| Team ID | SWUID20250184320 |
| Project Title | Online Payment Fraud Detection |
| Maximum Marks | 5 Marks |

**Feature Selection Report Template**

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

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| **Feature** | **Description** | **Selected (Yes/No)** | **Reasoning** |
| step | Unit of time (in hours) when the transaction occurred | Yes | Helps track time-based fraud patterns. |
| Type | Type of transaction (e.g., CASH\_OUT, PAYMENT) | Yes | Key feature to identify common fraud-related transaction types |
| Amount | Key feature to identify common fraud-related transaction types | **Yes** | Crucial to detect suspicious transaction sizes |
| NameOrig | Customer identifier | No | High cardinality and anonymized; doesn’t contribute to fraud detection |
| OldalanceOrg | Original balance before the transaction | Yes | Can help in understanding sudden fund movements |
| NewbalanceOrig | New balance after the transaction | Yes | Useful for balance tracking post-transaction |
| nameDest | Merchant/customer receiving the money | No | Anonymized and not very informative directly |
| oldbalanceDest | Original balance of destination account | Yes | Can signal sudden large deposits or transfers |
| newbalanceDest | New balance of destination account | Yes | Important for tracking post-transaction anomalies |
| isFraud | Target variable indicating if transaction is fraudulent | Yes | This is the label we aim to predict |
| isFlaggedFraud | Indicates if transaction was automatically flagged | Yes | A relevant metadata feature; useful for model evaluation |