**#region Rule#13 Pickup Card**

if (ActiveRules.Contains(13))

{

List<string> ruleVals = CommonMethods.GetRuleAmountCondition(13);

if (Int32.Parse(ruleVals[0]) > 0)

{

if (ruleVals[1] == ">=" && PickupCard.Any(x => x == transaction.ResponseCode) && Double.Parse(transaction.TransactionAmount.Trim()) >= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(13);

}

else if (ruleVals[1] == "<=" && PickupCard.Any(x => x == transaction.ResponseCode) && Double.Parse(transaction.TransactionAmount.Trim()) <= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(13);

}

}else

{

if(PickupCard.Any(x => x == transaction.ResponseCode))

{

addtrans = true;

RulesWithTags.Add(13);

}

}

}

#endregion

**#region Rule#12 Suspicious Bin**

if (ActiveRules.Contains(12))

{

string bin = new string(transaction.CardNumber.Take(6).ToArray());

List<string> ruleVals = CommonMethods.GetRuleAmountCondition(12);

if (Int32.Parse(ruleVals[0]) > 0)

{

if (ruleVals[1] != null && ruleVals[1] != null && ruleVals[1] == ">=" && Int32.Parse(transaction.TransactionAmount.Trim()) >= Int32.Parse(ruleVals[0]) \* 100 && CommonMethods.IsSuspiciousBin(bin)

)

{

addtrans = true;

RulesWithTags.Add(12);

}

else if (ruleVals[1] != null && ruleVals[1] != null && ruleVals[1] == "<=" && Int32.Parse(transaction.TransactionAmount.Trim()) <= Int32.Parse(ruleVals[0]) \* 100 && CommonMethods.IsSuspiciousBin(bin)

)

{

addtrans = true;

RulesWithTags.Add(12);

}

}

else

{

if (CommonMethods.IsSuspiciousBin(bin))

{

addtrans = true;

RulesWithTags.Add(12);

}

}

}

#endregion

**#region Rule#11 Subsequent Txn < Preceding Txn (Same Merchant)**

if (ActiveRules.Contains(11))

{

// string bin = new string(transaction.CardNumber.Take(6).ToArray());

List<string> ruleVals = CommonMethods.GetRuleAmountCondition(11);

if (Int32.Parse(ruleVals[0]) > 0)

{

var data = CompleteTransactions

.Where(x => x.CardAcceptorTerminalID == transaction.CardAcceptorTerminalID

&& x.CardNumber == transaction.CardNumber

//&& Int32.Parse(x.SNo) < Int32.Parse(transaction.SNo)

&& x.TransactionID != transaction.TransactionID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

)

.LastOrDefault();

if (data != null && ruleVals[1] == ">=" && Int32.Parse(transaction.TransactionAmount) < Int32.Parse(data.TransactionAmount)

&& Int32.Parse(transaction.TransactionAmount.Trim()) >= Int32.Parse(ruleVals[0]) \* 100

)

{

RuleElevenGroup.Add(data);

addtrans = true;

RulesWithTags.Add(11);

}

else if (data != null && ruleVals[1] == "<=" && Int32.Parse(transaction.TransactionAmount) < Int32.Parse(data.TransactionAmount) && Int32.Parse(transaction.TransactionAmount.Trim()) <= Int32.Parse(ruleVals[0]) \* 100

)

{

RuleElevenGroup.Add(data);

addtrans = true;

RulesWithTags.Add(11);

}

}

else

{

var data = CompleteTransactions

.Where(x => x.CardAcceptorTerminalID == transaction.CardAcceptorTerminalID

&& x.CardNumber == transaction.CardNumber

// && Int32.Parse(x.SNo) < Int32.Parse(transaction.SNo)

&& x.TransactionID != transaction.TransactionID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

)

.LastOrDefault();

if (data != null)

{

if (Int32.Parse(transaction.TransactionAmount) < Int32.Parse(data.TransactionAmount))

{

RuleElevenGroup.Clear();

RuleElevenGroup.Add(data);

addtrans = true;

RulesWithTags.Add(11);

}

}

}

}

#endregion

**#region Rule#10 Preceding Txn < Subsequent Txn (Same Merchant)**

if (ActiveRules.Contains(10))

{

List<string> ruleVals = CommonMethods.GetRuleAmountCondition(10);

if (Int32.Parse(ruleVals[0]) > 0)

{

var data = CompleteTransactions

.Where(x => x.CardAcceptorTerminalID == transaction.CardAcceptorTerminalID

&& x.CardNumber == transaction.CardNumber

//&& Int32.Parse(x.SNo) < Int32.Parse(transaction.SNo)

&& x.TransactionID != transaction.TransactionID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

)

.LastOrDefault();

if (data != null && ruleVals[1] == ">=" && Int32.Parse(data.TransactionAmount) < Int32.Parse(transaction.TransactionAmount)

&& Int32.Parse(transaction.TransactionAmount.Trim()) >= Int32.Parse(ruleVals[0]) \* 100

)

{

RuleTenGroup.Add(data);

addtrans = true;

RulesWithTags.Add(10);

}

else if (data != null && ruleVals[1] == "<="

&& Int32.Parse(data.TransactionAmount) < Int32.Parse(transaction.TransactionAmount)

&& Int32.Parse(transaction.TransactionAmount.Trim()) <= Int32.Parse(ruleVals[0]) \* 100

)

{

RuleTenGroup.Add(data);

addtrans = true;

RulesWithTags.Add(10);

}

}

else

{

var data = CompleteTransactions

.Where(x => x.CardAcceptorTerminalID == transaction.CardAcceptorTerminalID

&& x.CardNumber == transaction.CardNumber

//&& Int32.Parse(x.SNo) < Int32.Parse(transaction.SNo)

&& x.TransactionID != transaction.TransactionID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

)

.LastOrDefault();

if (data != null)

{

if (Int32.Parse(data.TransactionAmount) < Int32.Parse(transaction.TransactionAmount))

{

RuleTenGroup.Clear();

RuleTenGroup.Add(data);

addtrans = true;

RulesWithTags.Add(10);

}

}

}

}

#endregion

**#region Rule#9 Refferals Transaction**

if (ActiveRules.Contains(9))

{

List<string> ruleVals = CommonMethods.GetRuleAmountCondition(9);

if (Int32.Parse(ruleVals[0]) > 0)

{

if (ruleVals[1] != null && ruleVals[1] == ">=" && Refferals.Any(x => x == transaction.ResponseCode)

&& Int32.Parse(transaction.TransactionAmount.Trim()) >= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(9);

}

else if (ruleVals[1] != null && ruleVals[1] == "<=" && Refferals.Any(x => x == transaction.ResponseCode)

&& Int32.Parse(transaction.TransactionAmount.Trim()) <= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(9);

}

}

else

{

if (Refferals.Any(x => x == transaction.ResponseCode))

{

addtrans = true;

RulesWithTags.Add(9);

}

}

}

#endregion

**#region Rule#8 Fall Back Transaction**

if (ActiveRules.Contains(8))

{

List<string> ruleVals = CommonMethods.GetRuleAmountCondition(8);

if (Int32.Parse(ruleVals[0]) > 0)

{

if (ruleVals[1] != null && ruleVals[1] == ">=" && FallBack.Any(x => x == transaction.PANEntryMode)

&& Int32.Parse(transaction.TransactionAmount.Trim()) >= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(8);

}

else if (ruleVals[1] != null && ruleVals[1] == "<=" && FallBack.Any(x => x == transaction.PANEntryMode)

&& Int32.Parse(transaction.TransactionAmount.Trim()) <= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(8);

}

}

else

{

if (FallBack.Any(x => x == transaction.PANEntryMode))

{

addtrans = true;

RulesWithTags.Add(8);

}

}

}

#endregion

**#region Rule#7 Same Card Txn > 2 (Different Merchant)**

if (ActiveRules.Contains(7))

{

List<string> ruleVals = CommonMethods.GetRuleAmountCondition(7);

if (Int32.Parse(ruleVals[0]) > 0)

{

if (ruleVals[1] != null && ruleVals[1] == ">="

&& CompleteTransactions.Where(x => x.CardNumber == transaction.CardNumber

&& x.CardAcceptorID != transaction.CardAcceptorID

// && Int32.Parse(x.SNo) < Int32.Parse(transaction.SNo)

&& x.TransactionID != transaction.TransactionID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

).Count() > 2

&& Int32.Parse(transaction.TransactionAmount.Trim()) >= Int32.Parse(ruleVals[0]) \* 100

)

{

var ruleseven = CompleteTransactions

.Where(x => x.CardNumber == transaction.CardNumber

&& x.CardAcceptorID != transaction.CardAcceptorID

// && Int32.Parse(x.SNo) < Int32.Parse(transaction.SNo)

&& x.TransactionID != transaction.TransactionID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

)

.TakeLast(2).ToList();

RuleSevenGroup.AddRange(ruleseven);

addtrans = true;

RulesWithTags.Add(7);

}

else if (ruleVals[1] != null && ruleVals[1] == "<="

&& CompleteTransactions.Where(x => x.CardNumber == transaction.CardNumber

&& x.CardAcceptorID != transaction.CardAcceptorID

// && Int32.Parse(x.SNo) < Int32.Parse(transaction.SNo)

&& x.TransactionID != transaction.TransactionID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

).Count() > 2

&& Int32.Parse(transaction.TransactionAmount.Trim()) <= Int32.Parse(ruleVals[0]) \* 100

)

{

var ruleseven = CompleteTransactions

.Where(x => x.CardNumber == transaction.CardNumber

&& x.CardAcceptorID != transaction.CardAcceptorID

// && Int32.Parse(x.SNo) < Int32.Parse(transaction.SNo)

&& x.TransactionID != transaction.TransactionID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

)

.TakeLast(2).ToList();

RuleSevenGroup.AddRange(ruleseven);

addtrans = true;

RulesWithTags.Add(7);

}

}

else

{

var ruleseventest = CompleteTransactions.Where(

x => x.CardNumber == transaction.CardNumber

&& x.CardAcceptorID != transaction.CardAcceptorID

// && Int32.Parse(x.SNo) < Int32.Parse(transaction.SNo)

&& x.TransactionID != transaction.TransactionID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

).OrderBy(y => y.TransactionID, new SemiNumericComparer()).TakeLast(2).ToList();

if (ruleseventest.Count() == 2)

{

RuleSevenGroup.Clear();

RuleSevenGroup.AddRange(ruleseventest);

ruleseventest.Clear();

addtrans = true;

RulesWithTags.Add(7);

}

}

}

#endregion

**#region Rule#6 Same Card Same Merchant Txn > 2**

if (ActiveRules.Contains(6))

{

List<string> ruleVals = CommonMethods.GetRuleAmountCondition(6);

if (Int32.Parse(ruleVals[0]) > 0)

{

if (ruleVals[1] != null && ruleVals[1] == ">=" && CompleteTransactions.Where(x => x.CardNumber == transaction.CardNumber

&& x.CardAcceptorID == transaction.CardAcceptorID

&& x.CardAcceptorTerminalID == transaction.CardAcceptorTerminalID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

).Count() > 2 && Int32.Parse(transaction.TransactionAmount.Trim()) >= Int32.Parse(ruleVals[0]) \* 100)

{

var rulesix = CompleteTransactions

.Where(x => x.CardNumber == transaction.CardNumber

&& x.CardAcceptorID == transaction.CardAcceptorID

&& x.CardAcceptorTerminalID == transaction.CardAcceptorTerminalID

// && Int32.Parse(x.SNo) < Int32.Parse(transaction.SNo)

&& x.TransactionID != transaction.TransactionID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

)

.TakeLast(2).ToList();

RuleSixGroup.AddRange(rulesix);

addtrans = true;

RulesWithTags.Add(6);

}

else if (ruleVals[1] != null && ruleVals[1] == "<="

&& CompleteTransactions.Where(x => x.CardNumber == transaction.CardNumber).Count() > 2

&& CompleteTransactions.Where(x => x.CardAcceptorID == transaction.CardAcceptorID).Count() > 2

&& CompleteTransactions.Where(x => x.CardAcceptorTerminalID == transaction.CardAcceptorTerminalID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

).Count() > 2

&& Int32.Parse(transaction.TransactionAmount.Trim()) <= Int32.Parse(ruleVals[0]) \* 100)

{

var rulesix = CompleteTransactions

.Where(x => x.CardNumber == transaction.CardNumber

&& x.CardAcceptorID == transaction.CardAcceptorID

&& x.CardAcceptorTerminalID == transaction.CardAcceptorTerminalID

// && Int32.Parse(x.SNo) < Int32.Parse(transaction.SNo)

&& x.TransactionID != transaction.TransactionID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

)

.TakeLast(2).ToList();

RuleSixGroup.AddRange(rulesix);

addtrans = true;

RulesWithTags.Add(6);

}

}

else

{

var rulesixtest = CompleteTransactions

.Where(x => x.CardNumber == transaction.CardNumber

&& x.CardAcceptorID == transaction.CardAcceptorID

&& x.CardAcceptorTerminalID == transaction.CardAcceptorTerminalID

&& CommonMethods.GetDate(x.AddedOn) == CommonMethods.GetDate(transaction.AddedOn)

&& x.TransactionID != transaction.TransactionID

).OrderBy(y => y.TransactionID, new SemiNumericComparer())

.TakeLast(2).ToList();

if (rulesixtest.Count() == 2)

{

RuleSixGroup.Clear();

RuleSixGroup.AddRange(rulesixtest);

rulesixtest.Clear();

addtrans = true;

RulesWithTags.Add(6);

}

}

}

#endregion

**#region Rule#5 Low Risk MCC**

if (ActiveRules.Contains(5))

{

List<string> ruleVals = CommonMethods.GetRuleAmountCondition(5);

if (Int32.Parse(ruleVals[0]) > 0)

{

if (ruleVals[1] != null && ruleVals[1] == ">=" && LowRiskMCC.Contains(Int32.Parse(transaction.MerchantCategoryCode.Trim()))

&& Int32.Parse(transaction.TransactionAmount.Trim()) >= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(5);

}

else if (ruleVals[1] != null && ruleVals[1] == "<=" && LowRiskMCC.Contains(Int32.Parse(transaction.MerchantCategoryCode.Trim()))

&& Int32.Parse(transaction.TransactionAmount.Trim()) <= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(5);

}

}

else

{

if (LowRiskMCC.Contains(Int32.Parse(transaction.MerchantCategoryCode.Trim()))

&& Int32.Parse(transaction.TransactionAmount.Trim()) >= 25000)

{

addtrans = true;

RulesWithTags.Add(5);

}

}

}

#endregion

**#region Rule#4 Medium Risk MCC**

if (ActiveRules.Contains(4))

{

List<string> ruleVals = CommonMethods.GetRuleAmountCondition(4);

if (Int32.Parse(ruleVals[0]) > 0)

{

if (ruleVals[1] != null && ruleVals[1] == ">=" && MediumRiskMCC.Contains(Int32.Parse(transaction.MerchantCategoryCode.Trim())) && Double.Parse(transaction.TransactionAmount.Trim()) >= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(4);

}

else if (ruleVals[1] != null && ruleVals[1] == "<=" && MediumRiskMCC.Contains(Int32.Parse(transaction.MerchantCategoryCode.Trim()))

&& Double.Parse(transaction.TransactionAmount.Trim()) <= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(4);

}

}

else

{

if (MediumRiskMCC.Contains(Int32.Parse(transaction.MerchantCategoryCode.Trim()))

&& Int32.Parse(transaction.TransactionAmount.Trim()) >= 10000)

{

addtrans = true;

RulesWithTags.Add(4);

}

}

}

#endregion

**#region Rule#3 High Risk MCC**

if (ActiveRules.Contains(3))

{

List<string> ruleVals = CommonMethods.GetRuleAmountCondition(3);

if (Int32.Parse(ruleVals[0]) > 0)

{

if (ruleVals[1] != null && ruleVals[1] == ">=" && HighRiskMCC.Contains(Int32.Parse(transaction.MerchantCategoryCode.Trim()))

&& Int32.Parse(transaction.TransactionAmount.Trim()) >= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(3);

}

else if (ruleVals[1] != null && ruleVals[1] == "<=" && HighRiskMCC.Contains(Int32.Parse(transaction.MerchantCategoryCode.Trim()))

&& Int32.Parse(transaction.TransactionAmount.Trim()) <= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(3);

}

}

else

{

if (HighRiskMCC.Contains(Int32.Parse(transaction.MerchantCategoryCode.Trim()))

&& Int32.Parse(transaction.TransactionAmount.Trim()) >= 5000)

{

addtrans = true;

RulesWithTags.Add(3);

}

}

}

#endregion

**#region Rule#2 Response Code Not Found**

if (ActiveRules.Contains(2))

{

//Transaction Code Rule

if (transaction.ResponseCode != "00")

{

if (!CheckResponseCode(transaction.ResponseCode))

{

addtrans = true;

RulesWithTags.Add(2);

}

}

}

#endregion

**#region Rule#1 Suspicious Decline**

if (ActiveRules.Contains(1))

{

//Transaction Code Rule

if (transaction.ResponseCode != "00")

{

if (CheckResponseCode(transaction.ResponseCode))

{

List<string> ruleVals = CommonMethods.GetRuleAmountCondition(1);

if (Int32.Parse(ruleVals[0]) > 0)

{

if (ruleVals[1] != null && ruleVals[1] == ">=" && Int32.Parse(transaction.TransactionAmount.Trim()) >= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(1);

}

else if (ruleVals[1] != null && ruleVals[1] == "<=" && Int32.Parse(transaction.TransactionAmount.Trim()) <= Int32.Parse(ruleVals[0]) \* 100)

{

addtrans = true;

RulesWithTags.Add(1);

}

}

else

{

addtrans = true;

RulesWithTags.Add(1);

}

}

}

}

#endregion