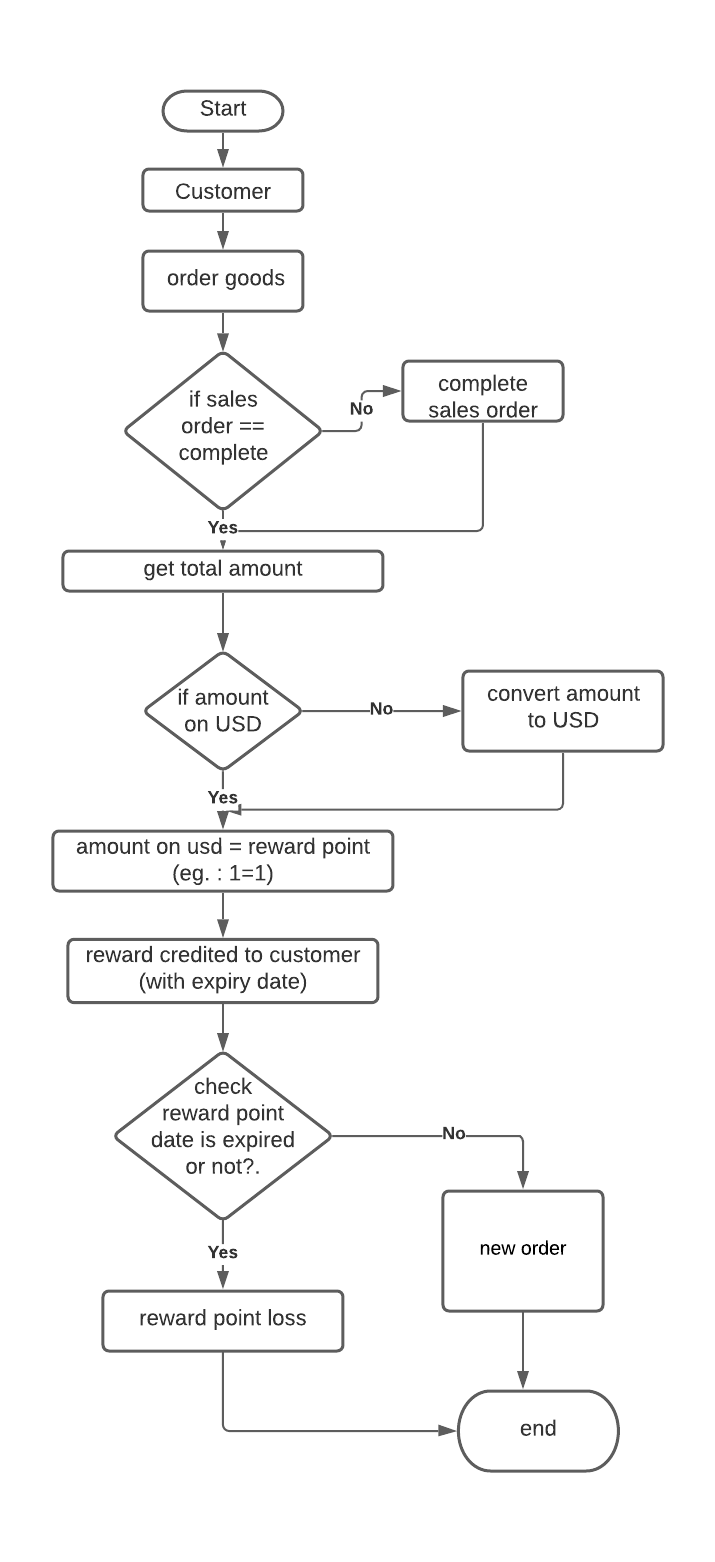
**Question 1: Visualize Solution and PHP Coding**

1. **Flowchart or UML diagram on the reward system**



1. **Design MySQL database schema for this reward system**

-- Table structure for table `customers`

CREATE TABLE `customers` (

`id` bigint UNSIGNED NOT NULL,

`full\_name` varchar(255) NOT NULL,

`contact\_no` varchar(255) NOT NULL

)

-- Table structure for table `order`

CREATE TABLE `order` (

`id` bigint UNSIGNED NOT NULL,

`customer\_id` bigint UNSIGNED NOT NULL,

`order\_status` enum('complete','notComplete') NOT NULL,

`order\_date` datetime NOT NULL

)

-- Table structure for table `order\_products`

CREATE TABLE `order\_products` (

`id` bigint UNSIGNED NOT NULL,

`order\_id` bigint UNSIGNED NOT NULL,

`item\_name` varchar(255) NOT NULL,

`price` decimal(8,2) NOT NULL

)

-- Table structure for table `points`

CREATE TABLE `points` (

`id` bigint UNSIGNED NOT NULL,

`order\_id` bigint UNSIGNED NOT NULL,

`customer\_id` bigint UNSIGNED NOT NULL,

`reward\_points` varchar(255) NOT NULL,

`expiry\_date` date NOT NULL,

`points\_status` enum('used','notused') NOT NULL

)

// points\_status indicate that point are used to by products

1. **PHP functions to credit user reward points after order completion**

<?php

function user\_reward($amount,$status, $currency) {

if ($status = 'completion') {

if ($currency = 'USD') {

$credit = $amountOnUSD;

return $credit;

} else {

// $convertedamount = convert amount to USD

$credit = $convertedamount;

return $credit;

}

}

echo "order is not completed!"

}

**Question 2: MySQL Query**

SELECT count(order\_table.order\_id) as no\_of\_order,SUM(CASE

WHEN order\_table.sales\_type = "Normal"

THEN oder\_products\_table.normal\_price

ELSE oder\_products\_table.promotion\_price

END) as total\_sales\_amount FROM `order\_table`

LEFT JOIN oder\_products\_table on oder\_products\_table.order\_id = order\_table.order\_id

**Question 3 : Calculation**

<?php

function cal\_percentage($amount) {

$count = $amount \* (6/100);

return $count;

}

echo "the actual amount of GST in MYR for this Order: ".cal\_percentage(5);