



### **Software Testing**

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## Table of Contents

<b>Code Introduction .....</b>	<b>3</b>
<b>Apply MCDC to implement the test cases.....</b>	<b>3</b>
<b>Decision Statement 1. ....</b>	<b>3</b>
<b>1.1 Implementation .....</b>	<b>3</b>
<b>Decision Statement 2 .....</b>	<b>4</b>
<b>1.1 Implementation .....</b>	<b>4</b>
<b>Flow Chart: .....</b>	<b>5</b>
<b>Path Predictions:.....</b>	<b>5</b>
<b>1<sup>st</sup> Path Prediction:.....</b>	<b>5</b>
<b>Path:.....</b>	<b>5</b>
<b>Expressions: .....</b>	<b>5</b>
<b>2<sup>nd</sup> Path Prediction:.....</b>	<b>5</b>
<b>Path:.....</b>	<b>5</b>
<b>3<sup>rd</sup> Path Prediction: .....</b>	<b>6</b>
<b>Path:.....</b>	<b>6</b>
<b>Expressions: .....</b>	<b>6</b>
<b>Test Oracle:.....</b>	<b>6</b>
<b>Expected Outputs: .....</b>	<b>6</b>

## Code Introduction

This code is a check out checker to check the details of customer to give them a discount on total bill where it take (Total Price, Total Items, and Voucher Number).

If the Total Price is greater than and equal to 20,000 Rs, Total Items are greater than 10 and voucher number is in between of 10 to 15 than customer get 20% discount.

If the Total Price is less than 20,000 Rs, Total Items are greater then and equal to 10, voucher number is in between of 1 to 10 than customer get 10% discount.

## Apply MCDC to implement the test cases.

Decision Statement 1.

if(TotalPrice >= 20000 && TotalItems > 10 || NoOfshop >= 5 && NoOfshop <=10 )

	Inputs			Outputs
Test	Total Price	Total Items	NoOfshop	Total Price && Total Items && NoOfshop
1	T	T	T	T
2	T	T	F	T
3	T	F	T	T
4	T	F	F	F
5	F	T	T	T
6	F	T	F	F
7	F	F	T	T
8	F	F	F	F

### 1.1 Implementation

	Inputs			Outputs
Test	Total Price	Total Items	NoOfshop	Total Price && Total Items && NoOfshop
1	25000	15	5	T
2	20000	11	1	T
3	30000	5	10	T
4	28000	10	2	F
5	15000	20	8	T
6	10000	25	3	F
7	5000	4	7	T
8	3000	3	4	F

## Decision Statement 2.

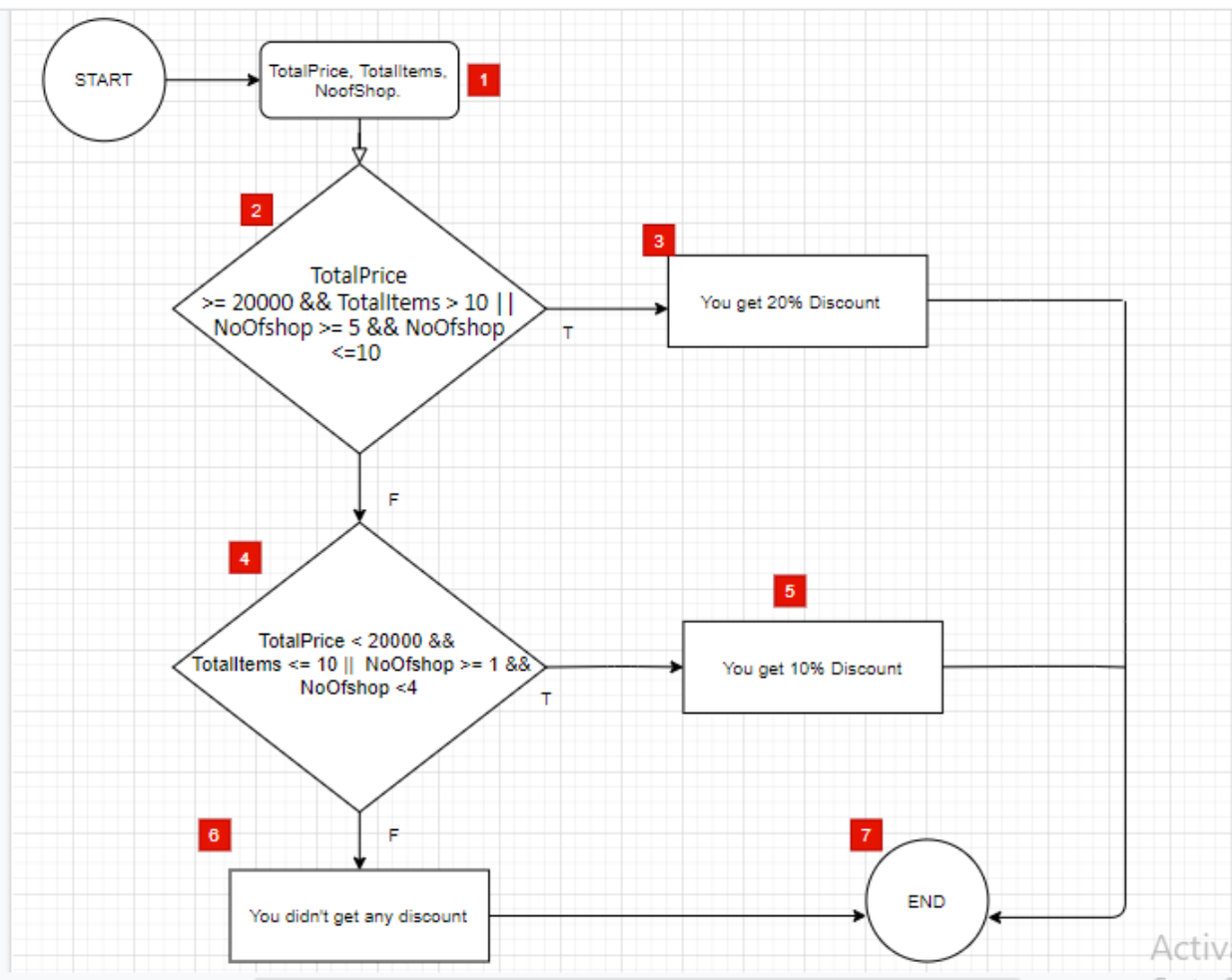
if(TotalPrice < 20000 && TotalItems <= 10 || NoOfshop >= 1 && NoOfshop <4)

	Inputs			Outputs
Test	Total Price	Total Items	NoOfshop	Total Price && Total Items && NoOfshop
1	T	T	T	T
2	T	T	F	T
3	T	F	T	T
4	T	F	F	F
5	F	T	T	T
6	F	T	F	F
7	F	F	T	T
8	F	F	F	F

### 1.1 Implementation

	Inputs			Outputs
Test	Total Price	Total Items	NoOfshop	Total Price && Total Items && NoOfshop
1	5000	3	1	T
2	3000	4	5	T
3	2500	15	2	T
4	3500	12	6	F
5	21000	8	3	T
6	22000	9	7	F
7	25000	12	4	T
8	30000	15	8	F

## Flow Chart:



## Path Predictions:

### 1<sup>st</sup> Path Prediction:

Path:

1->2->3->7

Expressions:

TotalPrice >= 20000 && TotalItems > 10 || NoOfShop >= 5 && NoOfShop <= 10 -> You get 20% Discount

### 2<sup>nd</sup> Path Prediction:

Path:

1->2->4->5->7

Expressions:

TotalPrice >= 20000 && TotalItems > 10 || NoOfShop >= 5 && NoOfShop <= 10 -> TotalPrice < 10000 && TotalItems <= 10 || NoOfShop >= 1 && NoOfShop < 4 -> You get 10% Discount

### 3<sup>rd</sup> Path Prediction:

Path:

1->2->4->6->7

Expressions:

TotalPrice >= 20000 && TotalItems > 10 || NoOfshop >= 5 && NoOfshop <=10 -> TotalPrice < 10000 &&

TotalItems <= 10 || NoOfshop >= 1 && NoOfshop <4 -> You didn't get any discount

### Test Oracle:

Expected Outputs:

1. You get 20% Discount
2. You get 10% Discount
3. You didn't get any discount

Path	Input			Actual Outcome	Expected Outcome
	Total Price	Total Items	NoOfShop		
1->2->3->7	25000	15	5	You get 20% Discount	You get 20% Discount
1->2->4->5->7	5000	5	2	You get 10% Discount	You get 10% Discount
1->2->4->6->7	-1	0	0	You didn't get any discount	You didn't get any discount