4. Design, develop, code and run the program in any suitable language to solve the commission problem. Analyze it from the perspective of dataflow testing, derive different test cases, execute these test cases and discuss the test results.

ALGORITHM

STEP 1: Define lockPrice=45.0, stockPrice=30.0, barrelPrice=25.0

STEP2: Input locks

STEP3: while(locks!=-1) ‘input device uses -1 to indicate end of data goto

STEP 12

STEP4:input (stocks, barrels)

STEP5: compute lockSales, stockSales, barrelSales and sales

STEP6: output(“Total sales:” sales)

STEP7: if (sales > 1800.0) goto STEP 8 else goto STEP 9

STEP8: commission=0.10\*1000.0; commission=commission+0.15 \* 800.0;

commission = commission + 0.20 \* (sales-1800.0)

STEP9: if (sales > 1000.0) goto STEP 10 else goto STEP 11

STEP10: commission=0.10\* 1000.0; commission=commission + 0.15 \*

(sales-1000.0)

STEP11: Output(“Commission is $”, commission)

STEP12: exit

#include<stdio.h>

#include<conio.h>

int main()

{

int locks, stocks, barrels, t\_sales, flag = 0;

float commission;

clrscr();

printf("Enter the total number of locks");

scanf("%d",&locks);

if ((locks <= 0) || (locks > 70))

{

flag = 1;

}

printf("Enter the total number of stocks");

scanf("%d",&stocks);

if ((stocks <= 0) || (stocks > 80))

{

flag = 1;

}

printf("Enter the total number of barrelss");

scanf("%d",&barrels);

if ((barrels <= 0) || (barrels > 90))

{

flag = 1;

}

if (flag == 1)

{

printf("invalid input");

getch();

exit(0);

}

t\_sales = (locks \* 45) + (stocks \* 30) + (barrels \* 25);

if (t\_sales <= 1000)

{

commission = 0.10 \* t\_sales;

}

else if (t\_sales < 1800)

{

commission = 0.10 \* 1000;

commission = commission + (0.15 \* (t\_sales - 1000));

}

else

{

commission = 0.10 \* 1000;

commission = commission + (0.15 \* 800);

commission = commission + (0.20 \* (t\_sales - 1800));

}

printf("The total sales is %d \n The commission is %f",t\_sales, commission);

getch();

return;

}

**TEST CASE 1:**

Enter the total number of locks : 4

Enter the total number of stocks : 6

Enter the total number of barrels : 7

Enter the number of locks and [To exit the loop enter -1 for locks]: -1

The total sales is 535.000000

The commission is 53.500000

**TEST CASE 2 :**

Enter the total number of locks : 55

Enter the total number of stocks 85

Enter the total number of barrelss 33

Enter the number of locks and [To exit the loop enter -1 for locks]: -1

The total sales is 5850.000000

The commission is 1030.000000