**COMPUTER APPLICATIONS**

**PROJECT**

**ICSE 2016-2017**

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**Class 10**

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**INTRODUCTION**

A Java program to create a Tour Package application which helps the user to book tickets for five different countries, they are:

1. Australia

2. Canada

3. United States Of America

4. Germany

5. Spain

In each country six famous tourist destination cities are offered. In each city two to three famous places are offered. Flight offered for the tour is Spice Jet. Depending on the number of tourists different rate percent of discount are offered.

Apart from just theoretical scripting of a program, this project actually coerces us to edit, compile, debug and run our application.

The concepts covered in this program are:

1. Loops(for and while loop)

2. Arrays

3. Switch case

4. If else

5. Scanner class

6. User defined functions

This program is user friendly and it helps to book tickets as per the user’s desirable destination. The final amount, terms and conditions of the tour is displayed before the user can book tickets so that the user can know beforehand the expenses of the tour. The calculations done in this program saves a lot of user’s time.

This program has some limitations like only five different countries are offered with only six tourist destination cities per country. While entering the correct package number, if the user enters a character data then the program does not accept it. This limitation can be done in the future scope.

**PROGRAM**

**STATEMENT**

There are five functions and one default constructor used in this program.

The user chooses their desired package, package details and discount offered according to the number of people are included in input() function. Calculations are done in calc() function. The discount given and final amount is displayed by discount() function. The details of the tourists are accepted through read() function and the bill is displayed with the help of display() function. All the functions are called together in the main() function.

If the user enters wrong data, then an appropriate error message is displayed. In some cases if the data entered by the user is wrong, then it keeps on asking the user to enter the required information until the correct data is entered. Time delay loops(empty for loops)are also used in the program.

**FLOW CHART**

Places covered in the package are displayed

Enter the number of tourists

Details of the package are displayed

If any other number

If 1

If you want to confirm your booking, then press 1, else any other number

Enter the name, gender and age of the tourists

Bill is displayed

**PROGRAM LISTING**

import java.util.\*;

//Program to show the available tour packages and to print the bill

public class TourPackage

{

int i,b,z,a;

int []d=new int [10];

String []n=new String [10];

String []x=new String [10];

char []g=new char [10];

double c=250000,amt,dis,tot;

TourPackage()

{

i=0;

a=0;

b=0;

z=0;

c=250000;

amt=0.0d;

dis=0.0d;

tot=0.0d;

}

Scanner sc=new Scanner(System.in);

void input()

{

System.out.println("\*\*\*\*\*\*\*\*\*\*WELCOME TO SUJAY TOURS AND TRAVELS\*\*\*\*\*\*\*\*\*\*");

System.out.println("The TOUR PACKAGES availabe in our travels are listed below");

System.out.println("1.Australia \n2.Canada \n3.United States Of America \n4.Germany \n5.Spain");

System.out.println("Choose your desired package by entering the number shown along the package");

a=sc.nextInt();

while(a>5||a<1)

{

System.out.println("Choose only from the above options");

a=sc.nextInt();

}

switch(a)

{

case 1:

System.out.println("THANK YOU for choosing the package");

System.out.println("The places covered in AUSTRALIA package are given below:");

System.out.println("Places covered in SYDNEY:\nSydney Opera House\nBondi Beach");

System.out.println("Places covered in CAIRNS:\nRainforest\nGreat Barrier Reef Gateway");

System.out.println("Places covered in PERTH:\nKings Park\nFremantle Port");

System.out.println("Places covered in GOLD COAST:\nSurfers Paradise\nTheme park\nCanals");

System.out.println("Places covered in ADELAIDE:\nRenowed Arts Festival\n1869 Food Hall");

System.out.println("Places covered in CANBERRA:\nParliment House\nAustralian War Memorial");

System.out.println();

System.out.println("Enter the number of people going on tour:");

b=sc.nextInt();

System.out.println("Total Expenses of 1 person including flight charges:Rs 2,50,000");

System.out.println("Flight offered is SPICE JET");

System.out.println("\*\*\*\*\*PACKAGE DETAILS\*\*\*\*\*");

System.out.println("The following table shows the discount offered");

System.out.println("Number of people\t Discount offered in percent");

System.out.println(" 1 \t 5");

System.out.println(" Couple (2) \t 10");

System.out.println(" 3-5 \t 15");

System.out.println(" 6-10 \t 20");

System.out.println(" More than 10 \t 35");

System.out.println();

System.out.println("The package consists of 15 days and 16 nights");

break;

case 2:

System.out.println("THANK YOU for choosing the package");

System.out.println("Places covered in CANADA package are given below:");

System.out.println("Places covered in TORONTO:\nCN Tower\nThe Royal Ontario museum");

System.out.println("Places covered in MONTREAL:\nVieux-Montreal\nNotre-Dame");

System.out.println("Places covered in NIAGARA FALLS:\nSkylon tower Views Of Horseshoe Falls");

System.out.println("Places covered in OTTAWA:\nNational Gallery\nRideu Canal");

System.out.println("Places covered in VICTORIA:\nButchart Gardens\nParliament House");

System.out.println("Places covered in WINNIPEG:\nSt.Boniface Quarter");

System.out.println();

System.out.println("Enter the number of people going on tour:");

b=sc.nextInt();

System.out.println("Total Expenses of 1 person including flight charges:Rs 2,50,000");

System.out.println("Flight offered is SPICE JET");

System.out.println("\*\*\*\*\*PACKAGE DETAILS\*\*\*\*\*");

System.out.println("The following table shows the discount offered");

System.out.println("Number of people\t Discount offered in percent");

System.out.println(" 1 \t 5");

System.out.println(" Couple (2) \t 20");

System.out.println(" 3-5 \t 22");

System.out.println(" 6-10 \t 24");

System.out.println(" More than 10 \t 35");

System.out.println();

System.out.println("The package consists of 13 days and 12 nights");

break;

case 3:

System.out.println("THANK YOU for choosing the package");

System.out.println("Places covered in UNITED STATES OF AMERICA package are given below:");

System.out.println("Places covered in NEWYORK CITY:\nStatue Of Liberty");

System.out.println("Places covered in LAS VEGAS:\nCasinos\nGourmet Dining");

System.out.println("Places covered in LOS ANGELES:\nVenice Beach");

System.out.println("Places covered in ORLANDO:\nWalt Disney World");

System.out.println("Places covered in CHICAGO:\nWillis Tower\nDeep Dish Pizza");

System.out.println("Places covered in HAWAII:\nVolcanoes\nBeaches\nKohala Coast");

System.out.println();

System.out.println("Enter the number of people going on tour:");

b=sc.nextInt();

System.out.println("Total Expenses of 1 person including flight charges:Rs 2,50,000");

System.out.println("Flight offered is SPICE JET");

System.out.println("\*\*\*\*\*PACKAGE DETAILS\*\*\*\*\*");

System.out.println("The following table shows the discount offered");

System.out.println("Number of people\t Discount offered in percent");

System.out.println(" 1 \t 5");

System.out.println(" Couple (2) \t 15");

System.out.println(" 3-5 \t 25");

System.out.println(" 6-10 \t 35");

System.out.println(" More than 10 \t 50");

System.out.println();

System.out.println("The package consists of 14 days and 15 nights");

break;

case 4:

System.out.println("THANK YOU for choosing the package");

System.out.println("Places covered in GERMANY package are given below:");

System.out.println("Places covered in BERLIN:\nBrandenburg Gate\nBerlin Wall");

System.out.println("Places covered in FRANKFURT:\nGoethe House\nmuseums");

System.out.println("Places covered in HAMBURG:\nCanals\nReeperbahn Nightlife");

System.out.println("Places covered in BREMEN:\nSt.Peter's Cathedral");

System.out.println("Places covered in STUTTGART:\nCar Museums");

System.out.println("Places covered in Aachen:\nAachen Cathedral\nMineral Springs");

System.out.println();

System.out.println("Enter the number of people going on tour:");

b=sc.nextInt();

System.out.println("Total Expenses of 1 person including flight charges:Rs 2,50,000");

System.out.println("Flight offered is SPICE JET");

System.out.println("\*\*\*\*\*PACKAGE DETAILS\*\*\*\*\*");

System.out.println("The following table shows the discount offered");

System.out.println("Number of people\t Discount offered in percent");

System.out.println(" 1 \t 5");

System.out.println(" Couple (2) \t 12");

System.out.println(" 3-5 \t 15");

System.out.println(" 6-10 \t 18");

System.out.println(" More than 10 \t 20");

System.out.println();

System.out.println("The package consists of 15 days and 16 nights");

break;

case 5:

System.out.println("THANK YOU for choosing the package");

System.out.println("Places covered in SPAIN package are given below:");

System.out.println("Places covered in BARCELONA:\nGothic Quarter\nTapas");

System.out.println("Places covered in MADRID:\nRoyal Talce\nPrado Museum");

System.out.println("Places covered in MAJORCA:\nPalma");

System.out.println("Places covered in VALENCIA:\nSerranos Towers");

System.out.println("Places covered in BILBAO:\nGehry's Guggenheim Museum");

System.out.println("Places covered in SEGOVIA:\nRoman Aqueduct");

System.out.println();

System.out.println("Enter the number of people going on tour:");

b=sc.nextInt();

System.out.println("Total Expenses of 1 person including flight charges:Rs 2,50,000");

System.out.println("Flight offered is SPICE JET");

System.out.println("\*\*\*\*\*PACKAGE DETAILS\*\*\*\*\*");

System.out.println("The following table shows the discount offered");

System.out.println("Number of people\t Discount offered in percent");

System.out.println(" 1 \t 5");

System.out.println(" Couple (2) \t 10");

System.out.println(" 3-5 \t 11");

System.out.println(" 6-10 \t 12");

System.out.println(" More than 10 \t 15");

System.out.println();

System.out.println("The package consists of 13 days and 14 nights");

break;

}

}

void calc()

{

switch(a)

{

case 1:

if(b==1)

{

dis=(0.05\*c)\*b;

}

else if(b==2)

{

dis=(0.1\*c)\*b;

}

else if(b>=3 && b<=5)

{

dis=(0.15\*c)\*b;

}

else if(b>=6 && b<=10)

{

dis=(0.2\*c)\*b;

}

else

{

dis=(0.35\*c)\*b;

}

break;

case 2:

if(b==1)

{

dis=(0.05\*c)\*b;

}

else if(b==2)

{

dis=(0.2\*c)\*b;

}

else if(b>=3 && b<=5)

{

dis=(0.22\*c)\*b;

}

else if(b>=6 && b<=10)

{

dis=(0.24\*c)\*b;

}

else

{

dis=(0.35\*c)\*b;

}

break;

case 3:

if(b==1)

{

dis=(0.05\*c)\*b;

}

else if(b==2)

{

dis=(0.15\*c)\*b;

}

else if(b>=3 && b<=5)

{

dis=(0.25\*c)\*b;

}

else if(b>=6 && b<=10)

{

dis=(0.35\*c)\*b;

}

else

{

dis=(0.5\*c)\*b;

}

break;

case 4:

if(b==1)

{

dis=(0.05\*c)\*b;

}

else if(b==2)

{

dis=(0.12\*c)\*b;

}

else if(b>=3 && b<=5)

{

dis=(0.15\*c)\*b;

}

else if(b>=6 && b<=10)

{

dis=(0.18\*c)\*b;

}

else

{

dis=(0.2\*c)\*b;

}

break;

case 5:

if(b==1)

{

dis=(0.05\*c)\*b;

}

else if(b==2)

{

dis=(0.1\*c)\*b;

}

else if(b>=3 && b<=5)

{

dis=(0.11\*c)\*b;

}

else if(b>=6 && b<=10)

{

dis=(0.12\*c)\*b;

}

else

{

dis=(0.15\*c)\*b;

}

break;

}

}

void discount()

{

System.out.println("DISCOUNT GIVEN="+dis);

tot=c\*b;

amt=tot-dis;

System.out.println("AMOUNT AFTER DISCOUNT = Rs"+amt);

}

void read()

{

System.out.println("If you have accepted the above terms and conditions of the package and if you want to confirm your booking, then press 1, else press any other number");

z=sc.nextInt();

if(z==1)

{

for(i=0;i<b;i++)

{

System.out.println("Enter the names of the tourists:");

n[i]=sc.next();

System.out.println("Enter m for MALE and f for female:");

g[i]=sc.next().charAt(0);

while(g[i]!='m'&&g[i]!='M'&&g[i]!='f'&&g[i]!='F')

{

System.out.println("Enter only 'm' or 'f':");

g[i]=sc.next().charAt(0);

}

if(g[i]=='m'||g[i]=='M')

{

x[i]="Male";

}

else if(g[i]=='f'||g[i]=='F')

{

x[i]="Female";

}

System.out.println("Enter the age:");

d[i]=sc.nextInt();

}

}

else

{

System.out.println("Thank you for visiting us\nWe hope you would visit us soon");

for(i=0;i<1000000000;i++)

{

}

System.exit(0);

}

}

void display()

{

System.out.println("\*\*\*\*\*\*\*\*\*\*SUJAY TOURS AND TRAVELS\*\*\*\*\*\*\*\*\*\*");

System.out.println("\*\*\*\*\*\*\*\*\*\* BILL \*\*\*\*\*\*\*\*\*\*");

System.out.println("Name\t Gender\t Age:");

for(i=0;i<b;i++)

{

System.out.println(n[i]+"\t"+x[i]+"\t"+d[i]);

}

System.out.println("Total number of people:"+b);

System.out.println();

System.out.println("TOTAL AMOUNT:Rs"+tot);

System.out.println("DISCOUNT GIVEN:Rs"+dis);

System.out.println("AMOUNT AFTER DISCOUNT:Rs"+amt);

System.out.println("THANK YOU FOR CHOOSING OUR TOURS AND TRAVELS");

System.out.println("WISH YOU A HAPPY AND SAFE JOURNEY");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

}

public static void main()

{

TourPackage t1=new TourPackage();

t1.input();

t1.calc();

t1.discount();

t1.read();

t1.display();

}

}

**GLOSSARY**

|  |  |  |
| --- | --- | --- |
| **Variable** | **Type** | **Use** |
| i | int | Loop Variable |
| a | int | Used to store the package entered by the user |
| b | int | Used to store the number of people going on tour |
| z | int | Used to confirm the booking of the tour |
| d | int | Used to store the tourist’s age |
| n | string | Used to store the tourist’s name |
| x | string | Used to store the tourist’s gender |
| g | char | Used to enter the tourist’s gender |
| c | double | Used to store the cost of tour for 1 person |
| amt | double | Used to store the amount after discount |
| dis | double | Used to store the discount |
| tot | double | Used to store the amount before discount |

|  |  |  |
| --- | --- | --- |
| **Function** | **Type** | **Use** |
| input() | void | Used to enter the tourist’s package and display the details of the package |
| calc() | void | Used to calculate the discount, amount before discount and amount after discount |
| discount() | void | Used to display discount and amount after discount |
| read() | void | Used to enter the details of the tourists |
| display() | void | Used to display the bill |
| main() | void | Used to call all functions |

**Sample Output**

\*\*\*\*\*\*\*\*\*\*WELCOME TO SUJAY TOURS AND TRAVELS\*\*\*\*\*\*\*\*\*\*

The TOUR PACKAGES available in our travels are listed below

1.Australia

2.Canada

3.United States Of America

4.Germany

5.Spain

Choose your desired package by entering the number shown along the package

7

Choose only from the above options

4

THANK YOU for choosing the package

Places covered in GERMANY package are given below:

Places covered in BERLIN:

Brandenburg Gate

Berlin Wall

Places covered in FRANKFURT:

Goethe House

museums

Places covered in HAMBURG:

Canals

Reeperbahn Nightlife

Places covered in BREMEN:

St.Peter's Cathedral

Places covered in STUTTGART:

Car Museums

Places covered in Aachen:

Aachen Cathedral

Mineral Springs

Enter the number of people going on tour:

4

Total Expenses of 1 person including flight charges: Rs 2,50,000

Flight offered is SPICE JET

\*\*\*\*\*PACKAGE DETAILS\*\*\*\*\*

The following table shows the discount offered

Number of people Discount offered in percent

1 5

Couple (2) 12

3-5 15

6-10 18

More than 10 20

The package consists of 15 days and 16 nights

DISCOUNT GIVEN=150000.0

AMOUNT AFTER DISCOUNT = Rs850000.0

If you have accepted the above terms and conditions of the package and if you want to confirm your booking, then press 1, else press any other number

1

Enter the names of the tourists:

Sujay

Enter m for MALE and f for female:

m

Enter the age:

15

Enter the names of the tourists:

Sanjay

Enter m for MALE and f for female:

k

Enter only 'm' or 'f':

m

Enter the age:

16

Enter the names of the tourists:

Anish

Enter m for MALE and f for female:

m

Enter the age:

13

Enter the names of the tourists:

Gourav

Enter m for MALE and f for female:

m

Enter the age:

20

\*\*\*\*\*\*\*\*\*\*SUJAY TOURS AND TRAVELS\*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* BILL \*\*\*\*\*\*\*\*\*\*

Name Gender Age:

Sujay Male 15

Sanjay Male 16

Anish Male 13

Gourav Male 20

Total number of people:4

TOTAL AMOUNT:Rs1000000.0

DISCOUNT GIVEN:Rs150000.0

AMOUNT AFTER DISCOUNT:Rs850000.0

THANK YOU FOR CHOOSING OUR TOURS AND TRAVELS

WISH YOU A HAPPY AND SAFE JOURNEY

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**CONCLUSION**

This project had been a great learning experience for me. I planned the program with my classmates and then discussed it with my teachers. I thank my friends and teacher in finalising this project. I could cover most of the concepts in this tour package application. I even learned time management, research work and presentation skills by doing this project.

**ACKNOWLEDGEMENT**

Particular thanks are due to my teacher Miss Kavya Rani for her resourceful guidance and information. I would like to thank Deccan International School, Bengaluru for providing me constant support and encouragement throughout this period of study.

I would like to express my special thanks of gratitude to my teacher Miss Kavya Rani who gave me the golden opportunity to do this wonderful project on the topic Tour Package, which also helped me in doing a lot of research and I came to know about so many new things. I am really thankful to you ma’am.

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