import java.util.Scanner;

public class KabApp {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

int num;

int points = 0;

boolean exit = true;

String[] history = new String[10];

int count = 0;

//main title screen

do {

System.out.println("\n===============");

System.out.printf("|%10s%4s\n","KAB APP","|");

System.out.println("===============");

System.out.println(" 1 - Kab car ");

System.out.println(" 2 - Kab food ");

System.out.println(" 3 - Info & History ");

System.out.println(" 4 - Exit ");

System.out.println(" Your option: ");

num = input.nextInt();

switch (num) {

//Kab car

case 1:

System.out.println("===============");

System.out.printf("|%10s%4s\n","KAB CAR","|");

System.out.println("===============");

double distance,toll,total;

String carHistory;

double tripCost = 0;

double kabDiscount = 0;

char answer;

//asking for distance

System.out.println(" Enter distance(km): ");

distance = input.nextDouble();

//asking for toll

System.out.println(" Enter toll(rm): ");

toll = input.nextDouble();

//make if statement for values, if negative values are entered program should be invalid

if(distance <0 || toll <0){

System.out.println("Invalid!");

break;

}

//making a yes or no statement for carPoints

else{ System.out.printf(" Have %d Kab points.Use it?(Y/N): ",points);

input.nextLine();

answer = input.nextLine().charAt(0);

//Trip cost should be flat rate of 5rm if distance <=5

if (distance <=5) {

tripCost = 5;

}

//formula for if distance is more than 5

else if( distance >5){

tripCost = 6\*(Math.sqrt(0.5\*distance-2))+5 ;

}

//if the user choose yes for discount

if (answer == 'y') {

kabDiscount = (int)(points /100) \*5;

points = 0;

//print tripcost and toll

System.out.printf("\n%-10s:%10.2f","Trip cost", tripCost);

System.out.printf("\n%-10s:%10.2f","Toll",toll);

System.out.println("\n-------------------");

//calculate total with discount

total = ( tripCost + toll - kabDiscount);

// for free rides

if (total <= 0) {

total=0;

System.out.printf("\n%-10s:%10.2f\n","Total",total);

System.out.printf("\n%-10s:%10.2f\n","Total",0.00);

points = 0;

}

else{

System.out.printf("\n%-10s:%10.2f\n","Total",total);

System.out.printf("Total: %7.2f", total);

points = 0;

}

//displaying history for car

carHistory = String.format("\t\tyou have been charged %.2f rm and you have earned %d points",total,points);

for(int i = history.length-1; i>=1; i--){

history[i] = history[i-1];

}

history[0] = carHistory;

count++;

}

//if user choose no

if (answer =='n') {

System.out.printf("\n%-17s:%10.2f","Trip cost", tripCost);

System.out.printf("\n%-17s:%10.2f","Toll",toll);

System.out.println("\n----------------------------");

total = tripCost + toll;

int carPoints = (int)total \* 10;

System.out.printf("\n%-17s:%10.2f\n","Total",total);

System.out.printf("\n%-11s:%7d\n","Kab Points Earned",carPoints);

points = points + carPoints;

carHistory = String.format("\tCar: you have been charged %.2f rm and you have earned %d points",total,carPoints);

for( int i = history.length-1; i>=1; i--){

history[i] = history[i-1];

}

history[0] = carHistory;

count++;

}

}

break;

//Kab food

case 2:

//displaying title and ask for values of price and distance

System.out.println("===============");

System.out.printf("|%10s%4s\n","KAB FOOD","|");

System.out.println("===============");

double foodPrice, foodDistance, foodTotal;

//asking the price of food

System.out.println(" Enter Food Price: ");

foodPrice = input.nextDouble();

//asking for distance

System.out.println(" Enter Distance(KM): ");

foodDistance = input.nextDouble();

// if values are in negative program should be invalid

if (foodPrice <0 || foodDistance <0) {

System.out.println("Invalid");

break;

}

//calculating tax

else{ System.out.printf("%-18s:%10.2f","Food Cost", foodPrice);

System.out.printf("\n%-18s:%10.2f","distance", foodDistance);

double tax = 0.12 \* foodPrice;

System.out.printf("\n%-18s:%10.2f","Tax ", tax);

//calculating delivery fee

double deliveryFee =3.75 \* foodDistance;

System.out.printf("\n%-18s:%10.2f","Delivery Fee ", deliveryFee);

System.out.println("\n------------------------------");

//calculating the total and points earned

foodTotal = foodPrice + deliveryFee + tax;

System.out.printf("\n%-18s:%10.2f\n","Total ", foodTotal);

int foodPoints = (int)foodTotal + 3;

System.out.printf("\n%-14s:%5.2s\n","Kab points earned ", foodPoints);

points = points + foodPoints;

//displaying history for food

carHistory = String.format("\tFood: you have been charged %.2f rm and you have earned %d points",foodTotal,foodPoints);

for( int i = history.length-1; i>=1; i--){

history[i] = history[i-1];

}

history[0] = carHistory;

count++;

}

continue;

case 3:

//Displaying history table and print the term below if nothing was added in food and car

System.out.println("Kab Points: "+points);

System.out.println("Hist# Description\n---------------------------------------------");

if(history[0] == null){

System.out.println("No history for the time being" );

}

else {

for ( int i = 0; i <= history.length-1; i++){ //{}

if( history[i] != null) {

System.out.println( (count-i)+ "" + history[i]);

}

}

}

continue;

//end of program

case 4:

System.out.printf("THANK YOU FOR USING KABAPP");

return;

}

}while(exit);

}

}