Answer # 1

private static void CountCoustomers(){

//Each index of array represent a category

//Index 0 = customers having ages b/w 0 - 10 and so on

int[] customer = new int[10];

String [] categories = {"0 - 9", "10 - 19", "20 - 29", "30 - 39", "40 - 49",

"50 - 59", "60 - 69", "70 - 79", "80 - 89", "90 - 99"};

int age;

Scanner scan = new Scanner(System.in);

for(int i = 0; i < 10; i++)

customer[i] = 0;

while(true){

System.out.print("Enter age, -1 to quit : ");

age = scan.nextInt();

if(age == -1)

break;

else if(age >= 0 && age <= 9)

customer[0]++;

else if(age >= 10 && age <= 19)

customer[1]++;

else if(age >= 20 && age <= 29)

customer[2]++;

else if(age >= 30 && age <= 39)

customer[3]++;

else if(age >= 40 && age <= 49)

customer[4]++;

else if(age >= 50 && age <= 59)

customer[5]++;

else if(age >= 60 && age <= 69)

customer[6]++;

else if(age >= 70 && age <= 79)

customer[7]++;

else if(age >= 80 && age <= 89)

customer[8]++;

else if(age >= 90 && age <= 99)

customer[9]++;

else

System.out.println("\nOnly integer vales are allowed. Enter a vslid number & Try again!");

}

for(int i = 0; i<customer.length; i++){

System.out.println(categories[i]+ " : "+customer[i]);

}

}

Answer # 2 (It was only for repeaters)

public static int RaisetoPower(int num, int exp){

int ans = 1;

if(exp == 0)

return ans;

for(int i =0; i < exp; i++) // 2^3 = 2\*2\*2 = 8

ans = num \* ans;

return ans;

}

Answer # 3

public static int CSum (int x){

int csum = 0;

for(int i = 1; i <= x; i++)

csum = csum + i;

return csum;

}

Answer # 4(a)

public static Boolean isEven(int a){

return (a % 2 == 0);

}

Answer # 4(b)

static int smallest(int[] numbers) {

int smallest = numbers[0]; //Suppose the number at 1st index of array is the smallest number.

for(int i = 1 ; i < numbers.length; i++){

if(numbers[i] < smallest){ //number at index i is smaller than the number stored in smallest.

smallest = numbers[i]; //change the smallest value to the number at current index.

}

}

return smallest;

}

Answer # 4(c)

public static void main(String[] args) {

int[] numArray = new int[10];

int i = 0;

int num;

Scanner in = new Scanner(System.in);

while(i < 10){

System.out.println("Enter 10 elements : ");

num = in.nextInt();

if(isEven(num)){

numArray[i] = num;

i++;

}

else

System.out.println("Sorry! Only even number are allowed.");

}

System.out.println("The smallest number of array is : "+smallest(numArray));

}

Answer # 5(a)

public static void print\_One\_Character\_per\_Line(){

Scanner in = new Scanner (System.in);

System.out.println("Enter a String : ");

String str = in.nextLine();

for(int i = 0; i < str.length(); i++)

System.out.println(str.charAt(i));//chaAt() is used to get a perticular chaacter of the string

}

Answer # 6

public static void create2DArray(int rows, int cols){

double[][] arr = new double[rows][cols];

Scanner in = new Scanner(System.in);

double num;

System.out.println("Enter array values : ");

for(int i = 0; i < rows; i++){

for(int j =0; j < cols; ){

num = in.nextDouble();

//All the values of the array should lie b/w the value of rows & cols

if(num >= rows && num <= cols){

arr[i][j] = num;

j++;

}

else

System.out.println("The range sllowed for input is from "+rows+" to "+cols);

}

}

//you were not asked to attempt this

for(int i = 0; i < rows; i++){

for(int j =0; j < cols; j++){

System.out.print(arr[i][j]+" ");

}

System.out.println();

}

}