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PROGRAMMING FUNDAMENTALS WEEK – 05 ASSIGNMENT

**Question 01**

class Example {

public static void main(String args[]) {

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

System.out.println("Hello World");

}

}

}

**Question 02**

class Example {

public static void main(String args[]) {

for(int i= 0; i<100;i++){

System.out.println(i+1);

}

}

}

**Question 03**

class Example {

public static void main(String args[]) {

for(int i=0 ; i<100 ; i++){

System.out.println(100-i);

}

}

}

**Question 04**

class Example {

public static void main(String args[]) {

for(int i=0 ; i<100 ; i+=2){

System.out.println(i);

}

}

}

**Question 05**

class Example {

public static void main(String args[]) {

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

Random input = new Random();

int num = input.nextInt(100);

System.out.println(num);

}

}

}

**Question 06**

class Example {

public static void main(String args[]) {

for(int i=0 ; i<50 ; i++){

Random input = new Random();

int num = input.nextInt(100);

if(num%2==0){

System.out.println(num+1);

}else{

System.out.println(num);

}

}

}

}

**Question 07**

class Example {

public static void main(String args[]) {

for(char i=65 ; i<=90 ; i++){

System.out.println(i);

}

}

}

**Question 08**

class Example {

public static void main(String args[]) {

int num = 4;

int fact = 1;

for(int i=num ; i>0 ; i--){

fact \*= i;

System.out.print(i+" \* ");

}

System.out.print(num<=0? "0! : 1" : "\b\b = "+fact);

}

}

**Question 09**

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

int count = 0;

for(int i=0 ; i<5 ; i++){

System.out.print("Please enter Number :");

int num = input.nextInt();

if(num>100){

count++;

}

}

System.out.print(count+" entered more than 100");

}

}

**Question 10**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Enter subject 1 Marks :");

int marks = input.nextInt();

int total = 0;

total += marks;

int min = marks;

int max = marks;

for(int i=1 ; i<10 ; i++){

System.out.print("Enter subject "+(i+1)+" Marks :");

marks = input.nextInt();

total+=marks;

if(marks>max){

max = marks;

}else if(marks<min){

min = marks;

}

}

double avarage = (double)total/10;

System.out.println();

System.out.println("Total : "+total);

System.out.println("Max : "+max);

System.out.println("Min : "+min);

System.out.println("avarage: "+avarage);

}

}

**Question 11**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

int totHeight = 0;

int totWeight = 0;

for(int i=0 ; i<100 ; i++){

System.out.print("Enter Student "+(i+1)+" Height :");

int height = input.nextInt();

totHeight +=height;

System.out.print("Enter subject "+(i+1)+" Weight :");

int weight = input.nextInt();

totWeight +=weight;

System.out.println();

}

double avgHeight = (double)totHeight/100;

double avgWeight = (double)totWeight/100;

System.out.println();

System.out.println("Avarage Height of Students : "+avgHeight);

System.out.println("Avarage Weight of Students : "+avgWeight);

}

}

**Question 12**

**For loop:-**

class Example {

public static void main(String args[]) {

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

System.out.println("Hello World");

}

}

}

**While loop:-**

class Example {

public static void main(String args[]) {

int count = 0;

while(count<10){

System.out.println("Hello World");

count++;

}

}

}

**Question 13**

class Example {

public static void main(String args[]) {

int count = 0;

while(count<100){

count++;

System.out.println(count);

}

}

}

**Question 14**

import java.util.\*;

class Example {

public static void main(String args[]) {

int count = 0;

while(count<100){

count++;

if(count%2==0){

System.out.println(count);

}

}

}

}

**Question 15**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Please Enter Integer :");

int num1 = input.nextInt();

int num2 = num1;

int count = 0;

int total = 0;

for(;num2>0;){

num2/=10;

count++;

int num3 =num1%10;

num1/=10;

total += num3;

}

System.out.println("Total = "+total);

}

}

**Question 16**

First loop prints 0 to 9

Second loop prints 0 2 4 6 8

Third loop prints 1 3 5 7 9

Fourth loop prints 0 to 9

Fifth loop prints 0 to 9

Sixth loop prints 1 to 10

Seventh loop prints 1 to 10

Eighth loop prints 1 to 9

Nineth loop prints 0 to 9

Tenth loop prints 1 to 10

Eleventh loop prints 0 to 10

Twelveth loop prints 0 to 9

**Question 17**

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Enter number of Employees:");

int emp = input.nextInt();

int totSal = 0;

int sal = 0;

System.out.println();

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

System.out.print("Enter Employee " + (i + 1) + " Salary:");

sal = input.nextInt();

totSal += sal;

}

// Balance paper and coins

int fiveThousand = totSal / 5000;

int fiveThousandbal = totSal % 5000;

int twoThousand = fiveThousandbal / 2000;

int twoThousandbal = fiveThousandbal % 2000;

int thousand = twoThousandbal / 1000;

int thousandbal = twoThousandbal % 1000;

int fiveHundred = thousandbal / 500;

int fiveHundredbal = thousandbal % 500;

int twoHundred = fiveHundredbal / 200;

int twoHundredbal = fiveHundredbal % 200;

int hundred = twoHundredbal / 100;

int hundredbal = twoHundredbal % 100;

int fifty = hundredbal / 50;

int fiftybal = hundredbal % 50;

int twenty = fiftybal / 20;

int twentybal = fiftybal % 20;

int ten = twentybal / 10;

int tenbal = twentybal % 10;

int five = tenbal / 5;

int fivebal = tenbal % 5;

int two = fivebal / 2;

int twobal = fivebal % 2;

int one = twobal / 1;

System.out.println();

System.out.printf("%-15s : %5d %n", "5000 Notes", fiveThousand);

System.out.printf("%-15s : %5d %n", "2000 Notes", twoThousand);

System.out.printf("%-15s : %5d %n", "1000 Notes", thousand);

System.out.printf("%-15s : %5d %n", "500 Notes", fiveHundred);

System.out.printf("%-15s : %5d %n", "200 Notes", twoHundred);

System.out.printf("%-15s : %5d %n", "100 Notes", hundred);

System.out.printf("%-15s : %5d %n", "50 Notes", fifty);

System.out.printf("%-15s : %5d %n", "20 Notes", twenty);

System.out.printf("%-15s : %5d %n", "10 Coins", ten);

System.out.printf("%-15s : %5d %n", "5 Coins", five);

System.out.printf("%-15s : %5d %n", "2 Coins", two);

System.out.printf("%-15s : %5d %n", "1 Coins", one);

}

}

**Question 18**

Prints C

**Question 19**

Only B

**Question 20**

A , C & E

**Question 21**

A : Never Ending loop starting from 0. Because condition always true.

B : Prints i = 0 to I = 9

C: i : 0

i : 2

i : 4

i : 6

i : 8

D: Prints Ch : A to Ch: Z

E: 0 10

1 9

2 8

3 7

4 6

5 5

F: Prints ASCII 1 to 127 characters

G: Prints 101 10 Times

**Question 22**

A , C, D, E, F, G, I, J, K

**Question 23**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

int countLess = 0;

int countMore = 0;

int num = 0;

while (num!=-1){

System.out.print("Enter Integer Number (Press -1 to exit) : ");

num = input.nextInt();

if(num<1000){

countLess++;

}else if(num>1000){

countMore++;

}

}

System.out.println();

System.out.println("There are "+countLess+" numbers are less than 1000");

System.out.println("There are "+countMore+" numbers are less more 1000");

}

}

**Question 24**

import java.util.\*;

class Example {

public static void main(String args[]) {

Random input = new Random();

int headCount = 0;

int tailCount = 0;

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

int num = input.nextInt(2);

if(num == 0){

System.out.println("HEAD");

headCount++;

}else if(num == 1){

System.out.println("TAIL");

tailCount++;

}

}

System.out.println();

System.out.println("Statics: "+headCount+" Heads and "+tailCount+" Tails");

}

}

**Question 25**

import java.util.\*;

class Example {

public static void main(String args[]) {

Random input = new Random();

for(int i= 0;i<5;i++){

int num = input.nextInt(6)+1;

System.out.print(num+" ");

}

}

}

**Question 26**

import java.util.\*;

class Example {

public static void main(String args[]) {

Random number = new Random();

Scanner input = new Scanner(System.in);

System.out.print("Please Enter your desired number :");

int dis = input.nextInt();

int num = 0;

int count = 0;

while(dis!=num){

num = number.nextInt(6)+1;

System.out.println(num);

count++;

}

System.out.println();

System.out.println("You have Rolled "+count+" times for get desired number");

}

}

**Question 27**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Please Enter Integer :");

int num1 = input.nextInt();

int num2 = num1;

int count = 0;

int total = 0;

while(num2>0){

num2/=10;

count++;

int num3 =num1%10;

num1/=10;

total += num3;

}

System.out.println("Total = "+total);

}

}

**Question 28**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Please Enter Integer :");

int num1 = input.nextInt();

int num2 = num1;

int count = 0;

int total = 0;

while(num2>0){

count++;

num2/=10;

int num3 =num1%10;

num1/=10;

total += num3;

System.out.print(num3);

}

}

}

**Question 29**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("How many bottles of beer are on the wall :");

int bottle = input.nextInt();

System.out.println();

for(int i = bottle; i>0 ; i--){

System.out.println(i+" bottles of beer on the wall, "+i+" bottles of beer.");

System.out.println("Take one down, pass it around, "+((i-1)==0?"no":(i-1))+" bottles of beer on the wall.");

System.out.println();

}

}

}

**Question 30**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Enter a Number :");

int num = input.nextInt();

int lDigit = num%10;

int fDigit = 0;

while(num>0){

fDigit = num%10;

num/=10;

}

if(lDigit==fDigit){

System.out.println("You Entered palindrome Number");

}else{

System.out.println("You did not Entered palindrome Number");

}

}

}

**Question 31**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Enter Student 1 Marks :");

int marks = input.nextInt();

int total = 0;

int min = marks;

int max = marks;

int count = 0;

while(marks != -1){

total+=marks;

if(marks>max){

max = marks;

}else if(marks<min){

min = marks;

}

System.out.print("Enter subject "+(count+2)+" Marks :");

marks = input.nextInt();

count++;

}

double avarage = (double)total/count;

System.out.println();

System.out.println("Total : "+total);

System.out.println("Max : "+max);

System.out.println("Min : "+min);

System.out.println("avarage: "+avarage);

}

}

**Question 32**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Enter Anything :");

String word = input.nextLine();

int length = word.length();

for(int i = length; i>0; i--){

System.out.print(word.charAt(i-1));

}

}

}

**Question 33**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Enter Word :");

String wordInput = input.next();

String word = wordInput.toLowerCase();

int length = word.length();

int count =0;

for(int i=0,j=(length-1);j>=0;i++,j--){

char letterl = word.charAt(i);

char letter2 = word.charAt(j);

if(letterl==letter2){

count++;

}

}

if(count==length){

System.out.println("You Entered palindrome Word");

}else{

System.out.println("You did not Entered palindrome Word");

}

}

}

**Question 34**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Enter Word :");

String wordInput = input.next();

String word = wordInput.toLowerCase();

System.out.print("Enter character :");

char charInput = input.next().charAt(0);

int length = word.length();

int charCount =0;

int count =0;

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

char letter = word.charAt(i);

if(charInput==letter){

count++;

}

}

System.out.println("You Entered "+charInput+" character "+count+" times");

}

}

**Question 35**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Enter base number :");

int base = input.nextInt();

System.out.print("Enter exponent :");

int expo = input.nextInt();

int answer = 1;

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

answer\*=base;

}

System.out.println("Answe is : "+answer);

}

}

**Question 36**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Enter Word :");

String wordInput = input.next();

String word = wordInput.toLowerCase();

int length = word.length();

int voCount =0;

int count =0;

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

char letter = word.charAt(i);

if(letter=='a'||letter=='e'||letter=='i'||letter=='o'||letter=='u'){

count++;

}

}

System.out.println("number of vowels :"+count);

System.out.println("number of consonants :"+(length-count));

}

}

**Question 37**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Enter integers 01 :");

int integer1 = input.nextInt();

System.out.print("Enter integers 02 :");

int integer2 = input.nextInt();

while (integer2 != 0) {

int temp = integer2;

integer2 = integer1 % integer2;

integer1 = temp;

}

System.out.println("Greatest common deviser is :"+integer1);

}

}

**Question 38**

B. 012

**Question 39**

1 2

**Question 40**

B. int y = 11;

**Question 41**

class Example {

public static void main(String [] args) {

for(int i = 0; i<5 ; i++){

for(int j = 0; j<5 ; j++){

System.out.println(i+""+j+" "+j+""+i+" "+(5-i)+""+j+" "+(5-i)+""+(5-j));

}

}

}

}

**Question 42**

class Example {

public static void main(String [] args) {

for(int j = 0 ; j<10 ; j++){

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

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

}

System.out.println();

}

}

}

**Question 43**

class Example {

public static void main(String [] args) {

for(int j = 0 ; j<10 ; j++){

for(int i = 0; i<(j+1) ; i++){

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

}

System.out.println();

}

}

}

**Question 44**

class Example {

public static void main(String [] args) {

for(int j = 0 ; j<10 ; j++){

for(int i = 10; i>j ; i--){

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

}

System.out.println();

}

}

}

**Question 45**

import java.util.\*;

class Example {

public static void main(String [] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter the size: ");

int num = input.nextInt();

for(int i=0 ; i<1 ; i++){

System.out.print(" \* |");

for(int j=1 ; j<=num ; j++){

System.out.print(" "+j+" ");

}

System.out.println();

}

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

for(int i=1 ; i<=num ; i++){

System.out.print(" "+i+" |");

for(int j=1 ; j<=num ; j++){

System.out.print(" "+(j\*i)+"");

}

System.out.println();

}

}

}

**Question 46**

import java.util.\*;

class Example {

public static void main(String [] args) {

Random number = new Random();

Scanner input = new Scanner(System.in);

final int RanNum = number.nextInt(10)+1;

int num = 0;

while(num!=RanNum){

System.out.print("Guess the number (1-10): ");

num = input.nextInt();

if(num>RanNum){

System.out.println("Too high, try again");

}else if(num<RanNum){

System.out.println("Too Low, try again");

}

}

System.out.println();

System.out.println("Your Guess is Coerrect. Number is "+RanNum);

}

}

**Question 47**

import java.util.\*;

class Example {

public static void main(String [] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter number of rows : ");

int num = input.nextInt();

for(int i = 1; i<=num ; i++){

for(int j = 1 ; j<=i ; j++){

System.out.print(j);

}

System.out.println();

}

}

}

**Question 48**

import java.util.\*;

class Example {

public static void main(String [] args) {

int i = 1;

while(i<=100){

int count = 0;

for(int j = 2 ; j<i ; j++){

if(i%j==0){

count++;

}

}

if(count==0){

System.out.println(i);

}

i++;

}

}

}

**Question 49**

import java.util.\*;

class Example {

public static void main(String [] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter number : ");

int inputNum = input.nextInt();

int num = inputNum;

int count = 0;

int total = 0;

while(num>0){

int digit = num%10;

int cal = digit\*digit\*digit;

total+=cal;

num/=10;

}

if(inputNum==total){

System.out.println("You Entered Armstrong number");

}else{

System.out.println("You did not Entered Armstrong number");

}

}

}

**Question 50**

import java.util.\*;

class Example {

public static void main(String [] args) {

int total = 0;

for(int i =1; i<1000 ; i++){

if(i%3==0||i%5==0){

total+=i;

}

}

System.out.println(total);

}

}

**Question 51**

import java.util.\*;

class Example {

public static void main(String [] args) {

boolean status = true;

int num = 1;

while(status){

int count = 0;

for(int i = 1 ; i<=20 ; i++){

if(num%i==0){

count++;

if(count==20){

status = false;

System.out.println(num+" smallest positive number that is evenly divisible by all of the numbers from 1 to 20 ");

}

}

}

num++;

}

}

}

\*\* The answer is 232,792,560. This code not Print any value. I think calculation gets too much time or this algorithm not efficient enough to calculate such value. But its working for the example case.

“2520 is the smallest number that can be divided by each of the numbers from 1 to 10”

**Question 52**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Enter Word :");

String wordInput = input.next();

String word = wordInput.toLowerCase();

int length = word.length();

int voCount =0;

int count =0;

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

char letter = word.charAt(i);

if(letter=='a'||letter=='e'||letter=='i'||letter=='o'||letter=='u'){

count++;

}

}

System.out.println("number of vowels :"+count);

System.out.println("number of consonants :"+(length-count));

}

}

**Question 53**

import java.util.\*;

class Example {

public static void main(String args[]) {

Scanner input = new Scanner(System.in);

System.out.print("Enter base value :");

int base = input.nextInt();

System.out.print("Enter Exponent value :");

int expo = input.nextInt();

int total = 1;

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

total\*=base;

}

System.out.print("Answer is : "+total);

}

}

**Question 54**

import java.util.\*;

class Example {

public static void main(String [] args) {

for(int i = 1; i<=100 ; i++){

int count = 0;

for(int j = 2 ; j<i ; j++){

if(i%j==0){

count++;

}

}

if(count==0){

System.out.println(i);

}

}

}

}

**Question 55**

import java.util.\*;

class Example {

public static void main(String[] args) {

double answer = 0.5;

int count = 0;

while(answer<=1){

double xCode = Math.random();

double yCode = Math.random();

answer = Math.sqrt(xCode\*xCode+yCode\*yCode);

System.out.println(xCode+" , "+yCode);

}

}

}

**Question 56**

**Line 24 :** a variable didn’t initialized a value before enter to the for loop. There is a conditional statement in for loop. So compiler dose not allow to compile. This happen because loop my not run depending on the condition. if so a variable will may not have any value

**Line 25 :** b variable didn’t initialized a value before enter to the while loop. There is a conditional statement in for loop. So compiler dose not allow to compile. This happen because while loop my not run depending on the condition. if so a variable will may not have any value

**Line 26 :** This code do compiles and when the program runs, return 11. This is do while loop. Means loop will run at lease once before checking the condition. so c variable will have an value.

**Line 27 :** Switch is conditional statement. also I dose not have an default value. Means this statement will not run depending on condition. so this program dose not compile.

**Line 28 :** This Switch statement dose have an default statement. So defiantly run. So e variable will have will have the 0 value.

**Question 57**

import java.util.\*;

class Example {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter your number : ");

int num = input.nextInt();

System.out.println();

for(int i = num ; i>0 ; i--){

if(num%i==0){

System.out.print(i+" ");

}

}

}

}

**Question 58**

E. The code will compile without error and will print 3 when run.

**Question 59**

The program will print 3, 2 when run. After break condition l variable not incremented.

**Question 60**

A. {{}} is a valid statement block.

B. { continue; } is a valid statement block.

**Question 61**

D. A B 2 A B 2 A B 2 A

**Question 62**

A. i=1, j=0

D. i=2, j=1

**Question 63**

E. Prints A

**Question 64**

C. Only 5 is printed

**Question 65**

A. 1 0 1 1 2 2 2 3 3 4