INDEX NO:30629

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MODULE:PROGRAMMING WITH C LANGUAGE

PRACTICAL 03 (ANSWERS)

(01)

#include<stdio.h>

int main()

{

int n1,n2,max;

printf("Enter two numbers");

scanf("%d %d",&n1,&n2);

max=n1;

if(n2>max)

max=n2;

printf("The highest number is %d\n",max);

}

(02)

#include<stdio.h>

int main()

{

int n1,n2,n3,min,max;

printf("Enter three numbers");

scanf("%d%d%d",&n1,&n2,&n3);

max=n1;

if(n2>max)

max=n2;

if(n3>max)

max=n3;

min+n1;

if(n2<min)

min=n2;

if(n3<min)

min=n3;

printf("The smallest number is%d\n",min);

printf("The highest number is%d\n",max);

}

(03)

#include<stdio.h>

int main()

{

char empname[20];

float bs,inc,ns;

printf("Enter employee name");

scanf("%s",&empname);

printf("Enter basic salary");

scanf("%f",&bs);

if(bs>=10000)

inc=bs\*0.15;

else if(bs>=5000)

inc=bs\*0.10;

else if(bs>=5000)

inc=bs\*0.10;

else

inc=bs\*0.05;

ns=bs+inc;

printf("Employee name%s\n",empname);

printf("New salary%.2f\n",ns);

}

(04)

#include<stdio.h>

#define PI 3.14159

int main()

{

double radius,diameter,circumference,area;

//read the radius from the user

printf("Enter the radius of the circle:");

scanf("%1f",&radius);

//Clculate the diameter,circumference, and area

diameter =2\*radius;

circumference=2\*PI\*radius;

area=PI\*radius\*radius;

//print the results

printf("Diameter:%.2f\n",diameter);

printf("Circumference:%.2f\n",circumference);

printf("Area:%.2f\n",area);

return 0;

}

(05)

#include<stdio.h>

int main()

{

int num1,num2;

printf("Enter the first integer:");

scanf("%d",&num1);

printf("Enter the second integer:");

scanf("%d",&num2);

if(num2=0&&num1%num2==0)

{

printf("%d is a multiple of%d\n",num1,num2);

}

}

(06)

#include<stdio.h>

int main()

{

printf("Integer equivalents:\n");

printf("Uppercase letters:\n");

printf("A: %d\n",'A');

printf("B: %d\n",'B');

printf("C: %d\n",'c');

printf("\n");

printf("Lowercase letters:\n");

printf("a: %d\n",'a');

printf("b: %d\n",'b');

printf("c: %d\n",'c');

printf("\n");

printf("Digits:\n");

printf("0: %d\n",'0');

printf("1: %d\n",'1');

printf("2: %d\n",'2');

printf("\n");

printf("Special symbols:\n");

printf("$: %d\n",'$');

printf("\*: %d\n",'\*');

printf("+: %d\n",'+');

printf("/: %d\n",'/');

printf("Blank character: %d\n",' ');

return 0;

(07)

PRACTICAL 04 (ANSWERS)

(01)

#include<stdio.h>

int main()

{

Int no,ans;

printf(“Enter the number”);

scanf(“%d”,&no);

ans=no%2;

if(ans==1)

printf(“%d is an odd number\n”,no);

else

printf(“%d is an even number\n”,no);

}

#include<stdio.h>

int main()

{

int n,k;

printf(“Enter a number”);

scanf(“%d”,&n);

k=n%2;

switch(k)

{

case0:printf(“%d is a even number”,n);

break;

default:printf(“%d is a odd number”,n);

break;

}

}

(02)

#include<stdio.h>

int main()

{

Int n1,n2,a,o,b;

printf(“Enter 1st number”);

scanf(“%d”,&n1);

printf(“Enter 2nd number”);

scanf(“%d’,&n2);

printf(“Choose an operation\n 1-->+\n 2-->-\n 3-->\*\n 4-->/\n Enter operation:”);

scanf(“%d”,&o);

switch(o)

{

case 1:a=n1+n2;

printf(“Answer is=%d”,a);

break;

case 2:if(n1<=n2)

a=n2-n1;

else

a=n1-n2;

printf(“Answer is =%d”,a);

break;

case 3:a=n1\*n2;

printf(“Answer is =%d”,a);

break;

case 4:if(n1<=n2)

a=n2/n1;

else

a=n1/n2;

b=n1%n2;

printf(“Answer is=%d\nReminder=%d”,a,b);

break;

default:printf(“Error:Invalid operation”);

}

}

(03)

#include<stdio.h>

int main()

{

float r,c,a,v,p=3.14159;

int o;

printf(“Select what you need to calculate\n1-->Circumference\n2-->Area\n3-->Volume”);

scanf(“%d”,&o);

printf(“Input the value of the radius”);

scanf(“%f”,&r);

switch(0)

{

Case 1:c=2\*p\*r;

Printf(“Circumference=%f”,c);

break;

case2:a=p\*r\*r;

printf(“Area=%f”,a);

break;

case3:v=4\*p\*r\*r\*r/3;

printf(“Volume=%f”,V);

break;

default:printf(“Error!Invalid operation”);

}

}

(04)

#include<stdio.h>

int main()

{

char l;

printf("Enter a letter :");

scanf("%c",&l);

switch(l)

{

case 'a':printf("%c is a vowel",l);

break;

case 'e':printf("%c is a vowel",l);

break;

case 'i':printf("%c is a vowel",l);

break;

case 'o':printf("%c is a vowel",l);

break;

case 'u':printf("%c is a vowel",l);

break;

case 'A':printf("%c is a vowel",l);

break;

case 'E':printf("%c is a vowel",l);

break;

case 'I':printf("%c is a vowel",l);

break;

case 'O':printf("%c is a vowel",l);

break;

case 'U':printf("%c is a vowel",l);

break;

default :printf("%c is not a vowel",l);

}

#include <stdio.h>

int main() {

int number;

int sum = 0;

printf("Enter numbers to add (-1 to stop):\n");

while (1) {

scanf("%d", &number);

if (number == -1) {

break; // Exit the loop if -1 is entered

}

sum += number;

}

printf("The sum is: %d\n", sum);

return 0;

}

}

(05)

#include <stdio.h>

int main()

{

int month;

printf("Enter month number (1-12): ");

scanf("%d", &month);

switch(month)

{

case 1:

printf("Total number of days = 31");

break;

case 2:

printf("Total number of days = 28");

break;

case 3:

printf("Total number of days = 31");

break;

case 4:

printf("Total number of days = 30");

break;

case 5:

printf("Total number of days = 31");

break;

case 6:

printf("Total number of days = 30");

break;

case 7:

printf("Total number of days = 31");

break;

case 8:

printf("Total number of days = 31");

break;

case 9:

printf("Total number of days = 30");

break;

case 10:

printf("Total number of days = 31");

break;

case 11:

printf("Total number of days = 30");

break;

case 12:

printf("Total number of days = 31");

break;

default:

printf("Invalid input! Please enter month number

between (1-12).");

}

return 0;

}

Part B

(01)

#include<stdio.h>

int main()

{

int x;

for(x=0;x<=100;x++)

{

printf("%d ",x);

}

}

#include<stdio.h>

int main()

{

int x=0;

while(x<=100)

{

printf("%d ",x);

x++;

}

}

#include<stdio.h>

int main()

{

int x=0;

do

{

printf("%d ",x);

x++;

}

while(x<=100);

}

(02)

#include<stdio.h>

int main()

{

int mark[10],i,sum,total;

float avg;

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

{

printf("Enter mark:\n");

scanf("%f",&mark);

sum+=mark;

}

avg=sum/10.0;

printf("The sum%d \n",sum);

if(avg<50.0)

{

printf("fail\n");

}

else{

printf("pass\n");

}

}

(03)

#include<stdio.h>

int main()

{

int number;

int i=1,factorial=1;

printf("Enter number: ");

scanf("%d",&number);

while(i<=number)

factorial=i;

i++;

printf("factorial is %d",factorial);

}

(04)

#include<stdio.h>

int main()

{

int number;

int total=0;

int reminder;

printf("Enter number: ");

scanf("%d",&number);

while(number!=0)

{

reminder=number%10;

total+=reminder;

number=number/10;

}

printf("The output is %d",total);

}

(05)

#include <stdio.h>

int main() {

int number, reversedNumber = 0, remainder;

printf("Enter an integer: ");

scanf("%d", &number);

do {

remainder = numreversedNumber = reversedNumber \* 10 +

remainder; // Append the digit to reversedNumber

number /= 10; // Remove the last digit from number

} while (number != 0);

printf("Reversed number: %d\n", reversedNumber);

return 0;

}

(06)

#include <stdio.h>

int main()

{

int base,exponent;

printf("Enter the base: ");

scanf("%d", &base);

printf("Enter the exponent: ");

scanf("%d", &exponent);ber % 10; // Get the last digit

int result = power(base, exponent);

printf("%d raised to the power of %d is: %d\n", base,

exponent, result);

return 0;

}

(07)

#include <stdio.h>

int main() {

int num1 = 0, num2 = 1, nextNum, count;

printf("The first 10 numbers of the Fibonacci sequence

are:\n");

printf("%d ", num1);

printf("%d ", num2);

for (count = 3; count <= 10; count++) {

nextNum = num1 + num2;

printf("%d ", nextNum);

num1 = num2;

num2 = nextNum;

}

return 0;

}

(08)

#include<stdio.h>

int main() {

int number;

printf("Enter a number: ");

scanf("%d", &number);

if (isArmstrongNumber(number)) {

printf("%d is an Armstrong number.\n", number);

} else {

printf("%d is not an Armstrong number.\n", number);

}

return 0;

}

(09)

#include <stdio.h>

int main() {

char letter;

printf("ASCII values for letters A to Z:\n");

for (letter = 'A'; letter <= 'Z'; letter++)

{

printf("Letter: %c, ASCII value: %d\n", letter, letter);

}

return 0;

}

(10)

#include <stdio.h>

int main()

{

int x,y;

for(x=1;x<=5;x++)

{

for(y=1;y<=x;y++)

{

printf("\* ");

}

printf("\n");

}

}

(11)

#include <stdio.h>

int main()

{

int number;

printf("Enter a positive integer: ");

scanf("%d", &number);

if(isprime(number))

printf("%d is a prime number.\n", number);

else

printf("%d is not a prime number.\n", number);

return 0;

}

(12)

#include <stdio.h>

int main()

{

int number;

int sum = 0;

printf("Enter numbers to add (-1 to stop):\n");

while (1) {

scanf("%d", &number);

if (number == -1) {

break; // Exit the loop if -1 is entered

}

sum += number;

}

printf("The sum is: %d\n", sum);

return 0;

}

(13)

#include <stdio.h>

int main() {

int size = 10;

int arr[size];

printf("Enter %d integers:\n", size);

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

scanf("%d", &arr[i]);

}

printf("The array is:");

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

{

printf(" %d", arr[i]);

}

printf("\n”);

return 0;

}

(14)

Practical No : 05

(01)

#include <stdio.h>

int main() {

int array[10];

int i;

int minValue, maxValue, sum = 0;

double average;

printf("Enter 10 integer values:\n");

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

printf("Value %d: ", i + 1);

scanf("%d", &array[i]);

}

minValue = array[0];

maxValue = array[0];

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

if (array[i] < minValue)

minValue = array[i];

if (array[i] > maxValue)

maxValue = array[i];

}

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

sum += array[i];

}

average = (double)sum / 10;

printf("\nMinimum value: %d\n", minValue);

printf("Maximum value: %d\n", maxValue);

printf("Average value: %.2f\n", average);

printf("\nValues in reverse order:\n");

for (i = 9; i >= 0; i--) {

printf("%d ", array[i]);

}

return 0;

}

(02)

#include <stdio.h>

void scalarSum(int arr1[], int arr2[], int size);

void vectorSum(int arr1[], int arr2[], int size);

void vectorProduct(int arr1[], int arr2[], int size);

void scalarProduct(int arr1[], int arr2[], int size);

int main() {

int size;

printf("Enter the size of the arrays: ");

scanf("%d", &size);

int arr1[size], arr2[size];

printf("Enter the elements of array 1: ");

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

scanf("%d", &arr1[i]);

}

printf("Enter the elements of array 2: ");

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

scanf("%d", &arr2[i]);

}

printf("Scalar Sum: ");

scalarSum(arr1, arr2, size);

printf("Vector Sum: ");

vectorSum(arr1, arr2, size);

printf("Vector Product: ");

vectorProduct(arr1, arr2, size);

printf("Scalar Product: ");

scalarProduct(arr1, arr2, size);

return 0;

}

void scalarSum(int arr1[], int arr2[], int size) {

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

printf("%d ", arr1[i] + arr2[i]);

}

printf("\n");

}

void vectorSum(int arr1[], int arr2[], int size) {

int sum[size];

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

sum[i] = arr1[i] + arr2[i];

printf("%d ", sum[i]);

}

printf("\n");

}

void vectorProduct(int arr1[], int arr2[], int size) {

int product[size];

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

product[i] = arr1[i] \* arr2[i];

printf("%d ", product[i]);

}

printf("\n");

}

void scalarProduct(int arr1[], int arr2[], int size) {

int result = 0;

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

result += arr1[i] \* arr2[i];

}

printf("%d\n", result);

}