C LAB

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# C Program to compute the simple interest si. Given p,n,r

#include <stdio.h>

void main()

{

int p, n, r;

float si;

printf("Enter p, n, r values : ");

scanf("%d%d%d", &p, &n, &r);

si = (p \* n \* r) / 100;

printf("Simple Interest = %f", si);

}

# 2. C Program to Check Whether a Number is even or odd

#include <stdio.h>

void main()

{

int n;

printf("Enter a number: ");

scanf("%d", &n);

if (n % 2 == 0)

printf("%d is even.", n);

else

printf("%d is odd.", n);

}

# 3. C Program to Find the Largest Number among Three Numbers

#include <stdio.h>

void main()

{

int n1, n2, n3;

printf("Enter three numbers: ");

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

if (n1 >= n2 && n1 >= n3)

printf("%d is the largest.", n1);

else if (n2 >= n1 && n2 >= n3)

printf("%d is the largest.", n2);

else

printf("%d is the largest.", n3);

}

# 4. C Program to Find Factorial of a Number

#include <stdio.h>

void main()

{

int n, fact = 1, i;

printf("Enter a number: ");

scanf("%d", &n);

for (i = 1; i <= n; i++)

fact \*= i;

printf("Factorial = %d", fact);

}

# 5. C Program to Generate Multiplication Table

#include <stdio.h>

void main()

{

int n, i, x;

printf("Enter the table: ");

scanf("%d", &x);

printf("Enter the limit: ");

scanf("%d", &n);

for (i = 1; i <= n; ++i)

printf("%d\*%d=%d\n", i, x, i \* x);

}

# 6. C Program to Reverse a Number

#include <stdio.h>

void main()

{

int n, rev = 0;

printf("Enter a number: ");

scanf("%d", &n);

while (n != 0)

{

rev = (rev \* 10) + (n % 10);

n /= 10;

}

printf("Reversed number = %d", rev);

}

# 7. C Program to find the sum of digit of a given number

#include <stdio.h>

void main()

{

int n, s = 0, r;

printf("Enter an integer: ");

scanf("%d", &n);

while (n != 0)

{

r = n % 10;

s = s + r;

n /= 10;

}

printf("Sum of digit = %d", s);

}

# 8. C Program to Check Whether a Number is Palindrome or Not

#include <stdio.h>

void main()

{

int n, rev = 0, temp;

printf("Enter a number: ");

scanf("%d", &n);

temp = n;

while (n != 0)

{

rev = (rev \* 10) + (n % 10);

n /= 10;

}

if (temp == rev)

printf("%d is a palindrome.", temp);

else

printf("%d is not a palindrome.", temp);

}

# 9. C program to print fibonacci series

#include <stdio.h>

void main()

{

int n, a = 0, b = 1, next;

printf("Enter the number of terms: ");

scanf("%d", &n);

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

{

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

next = a + b;

a = b;

b = next;

}

}

# 10. C Program to sort the given array

#include <stdio.h>

void main()

{

int a[10], i, j, t, n;

printf("Enter number of elements:");

scanf("%d", &n);

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

{

printf("Enter element for a[%d]: ", i);

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

}

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

{

for (j = i + 1; j < n; j++)

{

if (a[i] > a[j])

{

t = a[i];

a[i] = a[j];

a[j] = t;

}

}

}

printf("Sorted order: \n");

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

{

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

}

}

# 11. C Program to add two matrix

#include <stdio.h>

void main()

{

int a[3][3], b[3][3], c[3][3], i, j;

printf("\nEnter elements of 1st matrix:\n");

for (i = 0; i < 3; ++i)

for (j = 0; j < 3; ++j)

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

printf("Enter elements of 2nd matrix:\n");

for (i = 0; i < 3; ++i)

for (j = 0; j < 3; ++j)

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

for (i = 0; i < 3; ++i)

for (j = 0; j < 3; ++j)

c[i][j] = a[i][j] + b[i][j];

printf("\nSum of two matrices: \n");

for (i = 0; i < 3; ++i)

{

for (j = 0; j < 3; ++j)

printf("%d ", c[i][j]);

printf("\n\n");

}

}

# 12. C Program using string functions

#include <stdio.h>

#include <string.h>

void main()

{

char s1[20], s2[20], s3[20], l;

printf("Enter string 1:");

scanf("%s", s1);

printf("Enter string 2:");

scanf("%s", s2);

l = strlen(s1);

printf("Length of string 1 is %d\n", l);

strcpy(s3, s1);

printf("Copied string is %s\n", s3);

strcat(s1, s2);

printf("Concatenated string is %s\n", s1);

printf("Reversed string is %s", strrev(s1));

}

# 13. C Program using structure

#include <stdio.h>

struct student

{

char name[50];

int roll;

float marks;

} s;

void main()

{

printf("Enter name: ");

scanf("%s", s.name);

printf("Enter roll number: ");

scanf("%d", &s.roll);

printf("Enter marks: ");

scanf("%f", &s.marks);

printf("Displaying Information:\n");

printf("Name:%s\n", s.name);

printf("Roll number: %d\n", s.roll);

printf("Marks: %.1f\n", s.marks);

}

# 14. C Program to swap two numbers using pointers

#include <stdio.h>

void swap(int \*, int \*);

void main()

{

int x, y;

printf("Enter the value of x and y:\n");

scanf("%d%d", &x, &y);

printf("Before Swapping\nx = %d\ny = %d\n", x, y);

swap(&x, &y);

printf("After Swapping\nx = %d\ny = %d\n", x, y);

}

void swap(int \*a, int \*b)

{

int temp;

temp = \*b;

\*b = \*a;

\*a = temp;

}

# C Program to read a text from file

#include <stdio.h>

#include <ctype.h>

void main()

{

char a, a1;

FILE \*fp1, \*fp2;

fp1 = fopen("read.txt", "w");

while ((a = getchar()) != EOF)

{

putc(a, fp1);

}

fclose(fp1);

fp2 = fopen("read.txt", "r");

while ((a1 = getc(fp2)) != EOF)

{

printf("%c", toupper(a1));

}

fclose(fp2);

}

# Output

|  |  |
| --- | --- |
| 1 | Enter p, n, r values : 1000 5 10  Simple Interest = 500.000000 |
| 2 | Enter a number: 2  2 is even. |
| 3 | Enter three numbers: 5  2  4  5 is the largest. |
| 4 | Enter a number: 5  Factorial = 120 |
| 5 | Enter the table: 5  Enter the limit: 10  1\*5=5  2\*5=10  3\*5=15  4\*5=20  5\*5=25  6\*5=30  7\*5=35  8\*5=40  9\*5=45  10\*5=50 |
| 6 | Enter a number: 1995  Reversed number = 5991 |
| 7 | Enter an integer: 528  Sum of digit = 15 |
| 8 | Enter a number: 1991  1991 is a palindrome. |
| 9 | Enter the number of terms: 10  0  1  1  2  3  5  8  13  21  34 |
| 10 | Enter number of elements:5  Enter element for a[0]: 5  Enter element for a[1]: 2  Enter element for a[2]: 4  Enter element for a[3]: 1  Enter element for a[4]: 7  Sorted order:  1 2 4 5 7 |
| 11 | Enter elements of 1st matrix:  1  2  3  4  5  6  7  8  9  Enter elements of 2nd matrix:  9  8  7  6  5  4  3  2  1  Sum of two matrices:  10 10 10  10 10 10  10 10 10 |
| 12 | Enter string 1:sam  Enter string 2:kumar  Length of string 1 is 3  Copied string is sam  Concatenated string is samkumar  Reversed string is ramukmas |
| 13 | Enter name: sam  Enter roll number: 25  Enter marks: 100  Displaying Information:  Name:sam  Roll number: 25  Marks: 100.0 |
| 14 | Enter the value of x and y:  3  4  Before Swapping  x = 3  y = 4  After Swapping  x = 4  y = 3 |
| 15 | Hello World  HELLO WORLD |