

CCA-101: Fundamentals of IT & Programming

"Do it yourself" Assignment with Solutions

- Q. No. 1: Write a program in C to display your name and address on computer screen.
- Q. No. 2: Write a program in C to add two integer numbers
- Q.No. 3: Write a program in C to compute the value of x in this expression
 $x = 20 / (8 - 4) * 8 - 2$
- Q.No. 4: Write a program in C to compute a quotient and remainder
- Q.No. 5: Write a program in C to swap the value of two integer numbers
- Q. No. 6: Write a program to find the Largest of three numbers
- Q. No. 7: Write a Program to check whether a integer number is even or odd.
- Q.No. 8 Write a program to display table of any integer number.
- Q. No. 9 Write a program to display first ten terms of the Fibonacci sequence.
- Q. No. 10 Write a program to calculate the sum of digits of an integer number.
- Q. No.11 Write a program to reverse an integer number.
- Q. No.12 Write a program to calculate factors of a positive integer.

Write a program in C to displaying your name and address on computer screen.

```
#include <stdio.h> #include <string.h> int main()
```

```
char name [20], address [80];  
Printer ("Enter your name:");  
gets (name);
```

```
Print f("Enter your name:");  
gets (address);
```

[illegible]

```
Print f("your name: %s/n", name);
```

printf("your address: %s\n", address);

[illegible]

return 0;

3.

2. Write a program in C to add two integer numbers.

Certainly here's a simple C program that adds two integers.

```
no:) #include <stdio.h>
```

```
int main () {
```

```
int num1, num2, num3
```

// Ask the user for two integers

```
print fb("Enter the first integer: ");
```

```
scanf ("%d", & num1);
```

printf("Enter the second integers : ");

scanf("%d", &num2);

// Add the numbers

sum = num1 + num2;

// Display the result

printf("The sum of %d and %d is %d\n", num1, num2, sum);

return 0;

}

3. Write a program in C to compute the value of x in this expression
 $x = 20(8-4) * 8-2$.

Ans:- To compute the value of (x) in the expression $(x = \frac{200}{(8-4)} * 8 - 2)$ using C, ~~you can follow~~ order of operations (parentheses, multiplication and division from left to right, and the addition and subtraction).

C

1 #include <stdio.h>

2 int main() {

3 // Declare the variable to hold the result double x;

4 // Calculate the value of x using the given expression

5 $x = 200.0 / (8-4) * 8 - 2;$

```

9
10 // print the result
11 printf("The value of x is: %.2f\n", x);
12
13 return 0;
14 }

```

Write a program in C to compute a quotient and remainder.

*) C program that computes the quotient and remainder

C

```
#include <stdio.h>
```

```
int main () {
```

```
    int dividend, divisor, quotient, remainder,
```

```
    // Input the dividend and divisor
```

```
    printf("Enter the dividend: "),
```

```
    scanf("%d", &divisor);
```

```
    printf("Enter the divisor: "),
```

```
    scanf("%d", &divisor);
```

```
    // check if divisor is zero to avoid division by zero error
```

```
    if (divisor == 0) {
```

```
        printf("Error! Division by zero is not allowed.\n");
```

```
    // compute quotient and remainder
```

```
    quotient = dividend / divisor;
```

```
    remainder = dividend % divisor;
```

4

// output the results

```
Print F("Quotient : %d\n", quotient);  
Print F("Remainder : %d\n", remainder);  
}  
return 0;
```

Write a program in C to swap the value of two integer numbers.

3) C program to swap the values of two integer numbers using a temporary variable:

```
C  
#include <stdio.h>  
  
int main(){  
    * int a, b, c, temp;  
  
    // Input the values of a and b  
    Print F("Enter the value of a:");  
    Scan F("%d", &a)  
    Print F("Enter the value of b:");  
    Scan F("%d", &b);  
  
    // Display the values before swapping  
    Print F("\n Before swapping:\n");  
    Print F("a = %d, b = %d\n", a, b);  
  
    // Swapping using a temporary variable  
    temp = a
```

a = b

b = temp;

// Display the values after swapping

Print f("\n after swapping:\n");

Print f("a = %d, b = %d\n", a, b),

return 0;

}

Write a program to find largest of three numbers.

Q. Python program to find the largest of three numbers.

Python

Function to find the largest of three numbers def find_largest(a, b, c):

if a >= b and a >= c:

return a

elif b >= a and b >= c:

return b

else:

return c

Taking input from the user

num1 = float(input("Enter the first number: "))

num2 = float(input("Enter the second number: "))

num3 = float(input("Enter the third number: "))

Calling the function and displaying the result
`largest = find_largest(num, num2, num3)`
`Print ("The largest number is: ", largest)`

Write a program to check whether a integer number is even or odd.

3) Python that checks whether an integer number is even or odd:

Python

```

1 def check_even_odd(number):
2     if number % 2 == 0:
3         return "Even"
4     else:
5         return "odd"
6
7 # Input from the user
8 try:
9     user_input = int(input("Enter an integer number: "))
10    result = check_even_odd(user_input)
11    Print ("The number {user_input} is {result}.")
12 except value error:
13    Print ("Please enter a valid integer.")

```

Write a program to display table of any integer numbers:

3) Python program that display the p multiplication table for any integer number provided by the user

Python

```
def display-multiplication-table (number, limit = 10);
    print (f"multiplication Table for {number};")
    for i in range (1, limit + 1):
        print (f"{number} x {i} = {number * i}")
```

Input from the user

try:

```
user_input = int (input ("Enter an integer number: "))
display-multiplication-table (user_input)
```

except ValueError:

```
    print ("please enter a valid integer.")
```

4. Write a program to display first ten terms of the fibonacci sequence.

5) C

```
#include <stdio.h>
```

```
int main () {
```

```
    int i, n = 10;
```

```
    long long fib1 = 0, fib2 = 1, next Term;
```

```
    print f("The first 10 terms of the fibonacci sequence are: \n");
```

1 print ("The first two terms of the fibonacci sequence

Print ("%d %d", fib1, fib2);

1 Loop to generate the next terms

for (i = 3, i < n; i++) {

next Term = fib1 + fib2; // calculate the next term

Print ("%d", next Term);

// For Formatting Print a comma after each term except the last one

if (i < n) {

Print (", ");

}

* // update the previous two terms.

fib1 = fib2

fib2 = next term;

}

// update the previous two terms

fib1 = fib2

fib2 = next term;

}

Print ("\n");

} return 0;

Write a program to calculate the sum of digits to an integer number.

Python Program that calculates the sum of the digits of an integer number. you can run this code in any python environment.

Python.

```
def sum-of-digits(numbers):
    # convert the number to a string to iterate over each digits.
    # use abs() to handle negative numbers.
    return sum(int(digit) for digit in str(abs(number)))
```

Input from the user

try:

```
user_input = int(input("Enter an integer number: "))
```

```
result = sum-of-digits(user_input)
```

```
Print(f"The sum of the digits of {user_input} is: {result}")
```

except Value error.

```
Print("Please enter a valid integer.")
```

1. Write a program to reverse an integer number.

Ans) Python program to reverse an integer number

Python

```
def reverse_integer(n):
```

```
# Handle negative number
```

```
sign = -1 if n < 0 else 1
```

```
n = abs(n)
```

```
reversed_number = 0
```

```
while n != 0:
```

```
    digit = n % 10
```

```
# Apply the sign of the original number
```

```
    return sign * reversed_number
```

```
# Test the function
```

```
num = int(input("Enter an integer: "))
```

```
reversed_num = reverse_integer(num)
```

```
Print("Reversed integer: ", reversed_num)
```

Q12. Write a program to calculate factors of a positive integer.

Ans:) Python program to calculate the factors of a positive integer.

Python

```
def find_factory(n):
```

```
    factors = []
```

```
    for i in range(1, n+1):
```

```
if n % i == 0
```

```
    factors.append(i)
```

```
return factors
```

```
# Test the functions
```

```
num = int(input("Enter a positive integer: "))
```

```
if num > 0:
```

```
    factors = find_factors(num)
```

```
    print(f"Factors of {num}: {factors}")
```

```
else:
```

```
    print("Please enter a positive integer.")
```