Akash Gupta

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.

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Bara (U.S Nagar) UK

Q1. Write a program in C to displaying your name and address on computer screen.

Ans:-
```
# include < studio.h > # include <string.h > int main()

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

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

  Print f("= = = = = = = = = = = = = = = = = = = = = = =\n");

  Print f(" your name : %S/n", name );
  Print f("your address : % s \n ", address);
  Print f("= = = = = = = = = = = = = = = = = = = = \n");

  return 0;
}.
```

Q2. Write a program in C to add two integer numbers.

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

Ans:)
```
# include < studio.h >

int main ().{

        int num1, num 2, num 3

// Ask the user for two integers
print f6("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;
}
```

Q3. 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)} \times 8-2) using C, ~~you can follow~~ order of operations (parentheses, multiplication and division from left to right, and the addition and subtraction).

C

```
#include <studio.h>
int main(){
    // Declare the variable to hold the result double x;
    // Calculate the value of x using the given expression
    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 }
```

Q4. Write a program in C to complete a quotient and retrainder.

Ans:) C program that computer the quotient and remainder

```
C
#include <studio.h>
int main (){
    int dividend, division, quotient, remainder,
// Input the dividend and divisor
Print f ("Enter the dividend : "),
Scan f (" %d", & divisor);

Print f ("Enter the divisor : "),
Scan f(" % d , & divisor);

// check if divisor is zero to avoid division by zero error
if (divisor = = 0){

    Print ("Error! Divison by zero is not allowed.\n");
// compute quotient and remainder
quotient = dividend /divisor;
remainder = dividend % divisor;
```

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

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

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

```
C
# include <studio.n>
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
Printf("\n after swapping :\n");
Printf("a = %d, b = %d \n", a, b),
return 0;
}.
```

Q6. Write a program to find largest of three numbers.

Ans:) 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
num 1 = float (input ("Enter the first number : "))
num 2 = float (input ("Enter the second number : "))
num 3 = 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)
```

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

Ans:) Python that checks whether an interger 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 and integer number:"))
10 result = check_even_odd(user_input)
11 Print(f"The number {user-input is {result}.")
12 except value error
13 Print("Please enter a valid integer.")
```

88. Write a program to display table of any integer number:

Ans:) Python program that display the multiplication table for any integer number provided by the user

Python

```
1 def display_multiplication_table(number, limit = 10);
2 Print(F"multiplication Table for {number}:")
3 for i in range(1, limit + 1):
4. Print(F"{number} x {i} = {number * i}")
5
6 # Input from the user
7 try:
8 user_input = int(input("Enter an integer number:"))
9 display_multiplication_table(user_input)
10 except value Error:
11 Print("Please enter a valid integer.").
```

89. Write a program to display first ten terms of the Fibonacci sequence.

Ans:) C

```
#include <studio.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");
```

```
// print ("The first two terms of the fibonacci sequence
Print ("%lld, fib1, fib2);
// Loop to generate the next terms
for (i=3, i<n; i++){
next Term = fib1 + fib2; // calculate the next term
Print (" %lld", 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;
```

Q10. Write a program to calculate the sum of digits to an integer number.

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

Python.

```
1. def sum_of_digits(numbers):
2. # convert the number to a string to interate over each digits.
3 # use abs() to handle negative numbers.
4 return sum(int(digit) for digit in str(abs(number))).
5.
6. # Input from the user
7 try:
8 user_input = int(input("Enter an integer number:"))
9. result = sum_of_digits(user_input)
10. Print(F"The sum of the digits of {user_input} is: {result}")

11 except Value error.
12. Print("Please enter a valid integer.")
```

Q11. 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 pasitive 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.")).
```