



Green University of Bangladesh
Department of Computer Science and Engineering(CSE)
Faculty of Sciences and Engineering
Semester: (Summer, Year:2022), B.Sc. in CSE (Day)

LAB REPORT NO :09

Course Title: Structured Programming Lab

Course Code: CSE 104

Section: DE

Student Details

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Submission Date : 11-Sep-22
Course Teacher's Name : Md. Parvez Hossain

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<u>Lab Report Status</u>	
Marks:	Signature:
Comments:	Date:

Problem 01: Write a C program to check a number is positive or negative.

Code:

```
1  #include<stdio.h>
2  struct number
3  {
4      int num;
5  };
6  struct number var;
7  int main()
8  {
9      printf("Enter a number to check positive or negative:");
10     scanf("%d",&var.num);
11     if(var.num > 0)
12     {
13         printf("Positive");
14     }
15     else
16     {
17         printf("Negative");
18     }
19     return 0;
20 }
21
```

Output:

```
Enter a number to check positive or negative:5
Positive
Process returned 0 (0x0)   execution time : 19.305 s
Press any key to continue.
█
```

```
Enter a number to check positive or negative:-7
Negative
Process returned 0 (0x0)   execution time : 3.327 s
Press any key to continue.
█
```

Problem 02: Write a C program for input N numbers in array and print the summation of all value in array.

Code:

```
1  #include<stdio.h>
2  struct pro
3  {
4      int arr[500];
5      int size;
6  };
7
8  struct pro var1,var2;
9  int main()
10 {
11     int i;
12     printf("Enter the size of array:");
13     scanf("%d",&var1.size);
14     for(i=0;i<var1.size;i++)
15     {
16         printf("Enter the Elements:");
17         scanf("%d",&var2.arr[i]);
18     }
19     printf("Entered Array:");
20     for(i=0;i<var1.size;i++)
21     {
22         printf("%3d",var2.arr[i]);
23     }
24     int sum=0;
25
26     for(i=0;i<var1.size;i++)
27     {
28         sum=sum+var2.arr[i];
29     }
30     printf("\nSummation of all elements = %d",sum);
31     return 0;
32 }
33
```

Output:

```
Enter the size of array:5
Enter the Elements:1
Enter the Elements:2
Enter the Elements:3
Enter the Elements:4
Enter the Elements:5
Entered Array:  1  2  3  4  5
Summation of all elements = 15
Process returned 0 (0x0)   execution time : 2.953 s
Press any key to continue.
```

Problem 03: Write a C program to calculate Celsius to Fahrenheit.

Code:

```
1  #include<stdio.h>
2  struct temp
3  {
4      float c;
5      float f;
6  };
7  struct temp var1,var2;
8  int main()
9  {
10     printf("Enter the Celsius :");
11     scanf("%f",&var1.c);
12     var2.f=(var1.c*9/5)+32;
13     printf("In Fahrenheit :%.2f",var2.f);
14
15     return 0;
16 }
17
```

Output:

```
Enter the Celsius :36
In Fahrenheit :96.80
Process returned 0 (0x0)   execution time : 1.979 s
Press any key to continue.
```

Problem 04: Write a C Program to take input N size array and print reverse array.

Code:

```
1  #include<stdio.h>
2  struct pro
3  {
4      int arr[500];
5      int size;
6  };
7
8  struct pro var1,var2;
9  int main()
10 {
11     int i;
12     printf("Enter the size of array:");
13     scanf("%d",&var1.size);
14     for(i=0;i<var1.size;i++)
15     {
16         printf("Enter the Elements:");
17         scanf("%d",&var2.arr[i]);
18     }
19     printf("Entered Array:");
20     for(i=0;i<var1.size;i++)
21     {
22         printf("%3d",var2.arr[i]);
23     }
24     printf("\nReverse array :");
25     for(i=var1.size-1;i>=0;i--)
26     {
27         printf("%3d",var2.arr[i]);
28     }
29     return 0;
30 }
31
```

Output:

```
Enter the size of array:4
Enter the Elements:3
Enter the Elements:4
Enter the Elements:5
Enter the Elements:6
Entered Array:  3  4  5  6
Reverse array :  6  5  4  3
Process returned 0 (0x0)   execution time : 10.087 s
Press any key to continue.
```

Problem 05: Write a C program to check a character is vowel or consonant.

Code:

```
1  #include<stdio.h>
2  struct check
3  {
4      char c;
5  };
6  struct check var;
7  int main()
8  {
9      int uper,lower;
10     printf("Enter a character to check vowel or consonant:");
11     scanf("%c",&var.c);
12     lower=(var.c=='a' || var.c=='e' || var.c=='i' || var.c=='o' || var.c=='u');
13     uper=(var.c=='A' || var.c=='E' || var.c=='I' || var.c=='O' || var.c=='U');
14     if(lower || uper)
15     {
16         printf("Vowel");
17     }
18     else
19     {
20         printf("Consonant");
21     }
22     return 0;
23 }
24
```

Output:

```
Enter a character to check vowel or consonant:b
Consonant
Process returned 0 (0x0)   execution time : 4.300 s
Press any key to continue.
```

```
Enter a character to check vowel or consonant:a
Vowel
Process returned 0 (0x0)   execution time : 2.187 s
Press any key to continue.
```

Problem 06: Write a C program using nested structure to print your name and address with location.

Code:

```
1  #include<stdio.h>
2  #include<string.h>
3  struct na
4  {
5      char name[30];
6  }n;
7  struct addr
8  {
9      char address[50];
10 }a;
11 int main()
12 {
13     printf("Enter your full name:");
14     fgets(n.name,sizeof(n.name),stdin);
15     printf("Enter your address :");
16     fgets(a.address,sizeof(a.address),stdin);
17
18
19     printf("Name: ");
20     printf("%s",n.name);
21     printf("Your address :");
22     printf("%s",a.address);
23
24     return 0;
25 }
26
```

Output:

```
Enter your full name: Md.Israil Fakir
Enter your address : 157/2 Narsingdi, Dhaka
Name: Md.Israil Fakir
Your address : 157/2 Narsingdi, Dhaka

Process returned 0 (0x0)   execution time : 32.355 s
Press any key to continue.
```