

Assignment-1

1.

The screenshot shows the Code::Blocks IDE with a project named 'positive.c'. The code in the editor is as follows:

```
1 #include<stdio.h>
2
3 int main()
4 {
5     int num;
6
7     scanf("%d",&num);
8
9     if(num == 0)
10        printf("Neither positive nor negative");
11     else if(num < 0)
12        printf("Negative");
13     else
14        printf("Positive");
15
16     return 0;
17 }
```

The 'Logs & other' panel at the bottom shows build messages:

```
==== Build file: "no target" in "no project" (compiler: unknown) ====
---- Build finished: 0 error(s), 0 warning(s) (0 minute(s), 14 second(s))
```

To the right, a terminal window shows the execution of 'positive.exe':

```
Positive
Process returned 0 (0x0)   execution time : 91.049 s
Press any key to continue.
```

2.

The screenshot shows the Code::Blocks IDE with a project named 'divisible.c'. The code in the editor is as follows:

```
4 #include <stdio.h>
5
6 int main()
7 {
8     int num;
9
10    /* Input number from user */
11    printf("Enter any number: ");
12    scanf("%d", &num);
13
14
15    /*
16     * If num modulo division 5 is 0
17     * and num modulo division 11 is 0 then
18     * the number is divisible by 5 and 11 both
19     */
20    if((num % 5 == 0) && (num % 11 == 0))
21    {
22        printf("Number is divisible by 5 and 11");
23    }
24    else
25    {
26        printf("Number is not divisible by 5 and 11");
27    }
28
29    return 0;
30 }
```

The 'Logs & other' panel at the bottom shows build messages:

```
==== Build file: "no target" in "no project" (compiler: unknown) ====
---- Build finished: 0 error(s), 0 warning(s) (0 minute(s), 15 second(s))
```

To the right, a terminal window shows the execution of 'divisible.exe':

```
Enter any number: 55
Number is divisible by 5 and 11
Process returned 0 (0x0)   execution time : 10.509 s
Press any key to continue.
```

3.

The screenshot shows the Code::Blocks IDE with a C program named 'alphabet.c' open. The program's logic is as follows:

```

1  /**
2  * C program to check whether a character is alphabet or not
3  */
4
5  #include <stdio.h>
6
7  int main()
8  {
9      char ch;
10
11     /* Input a character from user */
12     printf("Enter any character: ");
13     scanf("%c", &ch);
14
15
16     if ((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z'))
17     {
18         printf("Character is an ALPHABET.");
19     }
20     else
21     {
22         printf("Character is NOT ALPHABET.");
23     }
24
25     return 0;
26 }

```

The output window shows the following execution details:

```

C:\Users\ravis\Desktop\alphabet.exe
Enter any character: a
Character is an ALPHABET.
Process returned 0 (0x0)   execution time : 19.470 s
Press any key to continue.

```

4.

The screenshot shows the Code::Blocks IDE with a C program named 'vowel.c' open. The program's logic is as follows:

```

1  #include <stdio.h>
2
3  int main()
4  {
5      int c = 0, count = 0;
6      char s[1000];
7
8      printf("Input a string\n");
9      gets(s);
10
11     while (s[c] != '\0') {
12         if (s[c] == 'a' || s[c] == 'A' || s[c] == 'e' || s[c] == 'E' || s[c] == 'i' || s[c] == 'I' || s[c] == 'o' || s[c] == 'O')
13             count++;
14         c++;
15     }
16
17     printf("Number of vowels in the string: %d", count);
18
19     return 0;
20 }

```

The output window shows the following execution details:

```

C:\Users\ravis\Desktop\vowel.exe
Input a string
ravisankar
Number of vowels in the string: 4
Process returned 0 (0x0)   execution time : 79.361 s
Press any key to continue.

```

5.

The screenshot shows the Code::Blocks IDE with a C++ project named 'Uppercase.c'. The code is as follows:

```

1  #include <stdio.h>
2
3  int main()
4  {
5      char ch;
6
7      /* input character from user */
8      printf("Enter any character: ");
9      scanf("%c", &ch);
10
11      if(ch >= 'A' && ch <= 'Z')
12      {
13          printf("%c is uppercase alphabet.", ch);
14      }
15      else if(ch >= 'a' && ch <= 'z')
16      {
17          printf("%c is lowercase alphabet.", ch);
18      }
19      else
20      {
21          printf("%c is not an alphabet.", ch);
22      }
23
24      return 0;
25  }

```

The terminal output shows the program execution:

```

Enter any character: C
'C' is uppercase alphabet.
Process returned 0 (0x0)   execution time : 8.376 s
Press any key to continue.

```

6

The screenshot shows the Code::Blocks IDE with a C++ project named 'amount.c'. The code is as follows:

```

1  #include <stdio.h>
2
3  int main()
4  {
5
6      int a[8] = {500, 100, 50, 20, 10, 5, 2, 1}, m, temp, i;
7
8      printf("Enter the amount:");
9
10     scanf("%d", &m);
11     temp = m;
12     for(i = 0; i < 8; i++)
13     {
14         printf("\nd notes is: %d", a[i], temp/a[i]);
15         temp = temp % a[i];
16     }
17
18 }

```

The terminal output shows the program execution:

```

Enter the amount:575
500 notes is:1
100 notes is:0
50 notes is:1
20 notes is:1
10 notes is:0
5 notes is:1
2 notes is:0
1 notes is:0
Process returned 0 (0x0)   execution time : 45.561 s
Press any key to continue.

```

7

The screenshot shows the CodeBlocks 20.03 IDE with a C program named 'num.c'. The program prompts the user to enter a number and then prints the number of digits in that integer. The output window shows the execution results for the input 35419.

```

1 #include <stdio.h>
2
3 int main()
4 {
5     int n; // variable declaration
6     int count=0; // variable declaration
7     printf("Enter a number");
8     scanf("%d",&n);
9     while(n!=0)
10    {
11        n=n/10;
12        count++;
13    }
14    printf("\nThe number of digits in an integer is : %d",count);
15    return 0;
16 }
17

```

Output window (C:\Users\javi\Desktop\num.exe):

```

Enter a number35419
The number of digits in an integer is : 5
Process returned 0 (0x0)   execution time : 17.158 s
Press any key to continue.

```

8.

The screenshot shows the CodeBlocks 20.03 IDE with a C program named 'sum.c'. The program prompts the user to enter an integer and then prints the sum of its digits. The output window shows the execution results for the input 1234.

```

1 #include <stdio.h>
2
3 int main()
4 {
5     int n, t, sum = 0, remainder;
6     printf("Enter an integer\n");
7     scanf("%d",&n);
8     t = n;
9
10    while (t != 0)
11    {
12        remainder = t % 10;
13        sum = sum + remainder;
14        t = t / 10;
15    }
16    printf("Sum of digits of %d = %d\n", n, sum);
17    return 0;
18 }
19
20
21
22

```

Output window (C:\Users\javi\Desktop\sum.exe):

```

Enter an integer
1234
Sum of digits of 1234 = 10
Process returned 0 (0x0)   execution time : 19.229 s
Press any key to continue.

```

9.

The screenshot shows the CodeBlocks IDE with the file 'reverse1.c' open. The code is as follows:

```

1 #include <stdio.h>
2
3 int main() {
4     int n, reverse = 0, remainder;
5
6     printf("Enter an integer: ");
7     scanf("%d", &n);
8
9     while (n != 0) {
10        remainder = n % 10;
11        reverse = reverse * 10 + remainder;
12        n /= 10;
13    }
14
15    printf("Reversed number = %d", reverse);
16
17    return 0;
18 }

```

The 'Logs & others' panel shows the following build messages:

```

--- Build file: "no target" in "no project" (compiler: unknown) ---
--- Build finished: 0 error(s), 0 warning(s) (0 minute(s), 19 second(s))

```

The terminal window shows the execution of 'reverse1.exe':

```

Enter an integer: 12345
Reversed number = 54321
Process returned 0 (0x0)   execution time : 21.298 s
Press any key to continue.

```

10.

The screenshot shows the CodeBlocks IDE with the file 'decimal.c' open. The code is as follows:

```

1 #include <stdio.h>
2 #include <stdlib.h>
3 int main() {
4     int a[10], n, i;
5     system("cls");
6     printf("Enter the number to convert: ");
7     scanf("%d", &n);
8     for(i=0; n>0; i++)
9     {
10        a[i]=n%2;
11        n=n/2;
12    }
13    printf("\nBinary of Given Number is=");
14    for(i=i-1; i>=0; i--)
15    {
16        printf("%d", a[i]);
17    }
18    return 0;
19 }

```

The 'Logs & others' panel shows the following build messages:

```

--- Build file: "no target" in "no project" (compiler: unknown) ---
--- Build finished: 0 error(s), 0 warning(s) (0 minute(s), 16 second(s))

```

The terminal window shows the execution of 'decimal.exe':

```

Enter the number to convert: 112
Binary of Given Number is=1110000
Process returned 0 (0x0)   execution time : 9.906 s
Press any key to continue.

```