

LECTURE 2 ASSIGNMENT

1. The code for question 1:

```
1 // Preprocessor Directives
2 #include <stdio.h>
3 #include <stdlib.h>
4
5 // where the program begins
6 int main(void)
7 {
8     // declaring the variables; first thing to do before giving them value
9     int number, number1, product, number2, reverse;
10
11     // printing the instruction
12     printf ("Enter a two-digit number: ");
13     scanf ("%d", &number); // where the value will be stored, in the variable "number"
14     // used %d since the variable type is an integer
15
16     // formula in getting the reverse of a two-digit number
17     number1 = number % 10; // first is getting the remainder of the given number
18     product = number1 * 10; // multiply it to 10 to make it a tens
19     number2 = number / 10; // next is to get the quotient by dividing the given number by ten
20     reverse = product + number2; // adding the product and the quotient to get the reverse of the number
21
22     // printing the output or value in the variable reverse\
23     printf ("Reverse number is: %d", reverse);
24
25     return 0;
26 }
```

2. The code for question 2:

```
1 // Preprocessor Directives
2 #include <stdio.h>
3 #include <stdlib.h>
4
5 // where the program begins
6 int main(void)
7 {
8     // declaring the variables; first thing to do before giving them value
9     int number, number1, product, reverse;
10
11     // printing the instruction
12     printf ("Enter a three-digit number: ");
13     scanf ("%d", &number); // where the value will be stored, in the variable "number"
14     // used %d since the variable type is an integer
15
16     // formula in getting the reverse of a three-digit number
17     number1 = number % 10; // first is getting the remainder of the given number
18     //ex: 123 will become 3
19     number /= 10; // to remove the last number in the variable number
20     // only 12 remains
21     product = number1 * 10 + number % 10; // multiply it to 10 and add to the remainder of the
22     // 3 * 10 = 30 + (12 % 10) = 30 + 2 = 32
23     number /= 10; // to remove the last number in the variable number
24     // only 1 remain
25     reverse = product * 10 + number % 10; // next is the value in the variable product will be
26     // 32 * 10 + (1 % 10) = 320 + 1 = 321 (the reverse)
27
28     // printing the output or value in the variable reverse
29     printf ("Reverse number is: %d", reverse);
30
31     return 0;
32 }
```

3.

a.)

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main(void)
5  {
6      int i, j, k;
7
8      i = 3;
9      j = 4;
10     k = 5;
11
12     printf("%d", i < j || ++j < k);
13
14     return 0;
15 }
```

The output in this code is 1.

b.)

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main(void)
5  {
6      int i, j, k;
7
8      i = 7;
9      j = 8;
10     k = 9;
11
12     printf("%d", i - 7 && j++ < k);
13
14     return 0;
15 }
```

The output in this code is 0.

c.)

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main(void)
5  {
6      int i, j, k;
7
8      i = 7;
9      j = 8;
10     k = 9;
11
12     printf("%d", (i = j) || (j == k));
13
14     return 0;
15 }
```

The output in this code is 1.

d.)

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main(void)
5  {
6      int i, j, k;
7
8      i = j = k = 1;
9
10     printf("%d", ++i || ++j && ++k);
11     printf("%d %d %d", i, j, k);
12
13     return 0;
14 }
```

The output in this code is 12 1 1.