# Tutorial 3

1. Explain the keywords: a) control code b) Flag modifier c) Format Specifier d)precision modifier e) size modifier f) white space g) width modifier

   a) A numeric value or string of such values such as a simple control character or escaped character which causes some other specific commanded or requested action to occur, which would not otherwise be accessible to a user or device generating the code.

   b) The flag modifier allows one or more print modifications to be specified. The flag can be any one of the characters from the below table.

   c) It is a way to tell the compiler what type of data is in a variable during taking input using scanf() or printing using printf().

   d) Precision tells the minimum number of digits in integer, maximum number of characters in string and number of digits after decimal part in floating value.

   e) It limits user to store small integer values from -32768 to 32767. It can be used only on int data type.

   f) They serve as the spaces between words and lines on a printed page.

   g) The width modifier is used to specify the minimum number of positions that the output will take. If the user does not mention any width then the output will take just enough positions required for the output data.

2. Explain how can print % character using printf()?

We can print “%” using “%%”.

main.c

Run

Output

```
1  /* Program to print %*/
2  #include<stdio.h>
3  int main()
4  {
5      printf("%%");
6      return 0;
7  }
```

```
/tmp/g74O1Aq4tz.o
%
```

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3. What will be the return type of print()?

printf() returns the number of characters successfully written on the output.

4. How do write printf() so that width of the field can be specified at run time?

We can do this by: **printf("%*d", width, value);**

5. Explain the acronym “EOF”?

end-of-file (EOF) is a condition in a computer operating system where no more data can be read from a data source.

6. Differentiate between formatted input and output statement in C program?

- The function scanf() is used for formatted input from standard input and provides many of the conversion facilities of the function printf().
- The function printf() is used for formatted output to standard output based on a format specification. The format specification string, along with the data to be output, are the parameters to the printf() function.

7. What does the getchar() and putchar() functions performs?

- getchar () function reads character from keyboard.
- putchar () function writes a character to screen.

8. Will the call scanf(“%d), i) works? Provide your reasons?

No, it won’t work since % should come instead of ) after d.

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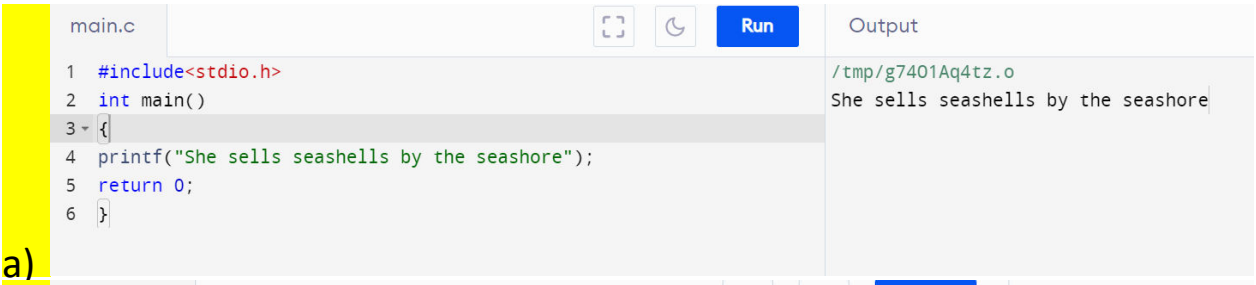
9. On the screen write the words: She sells seashells by the seashore

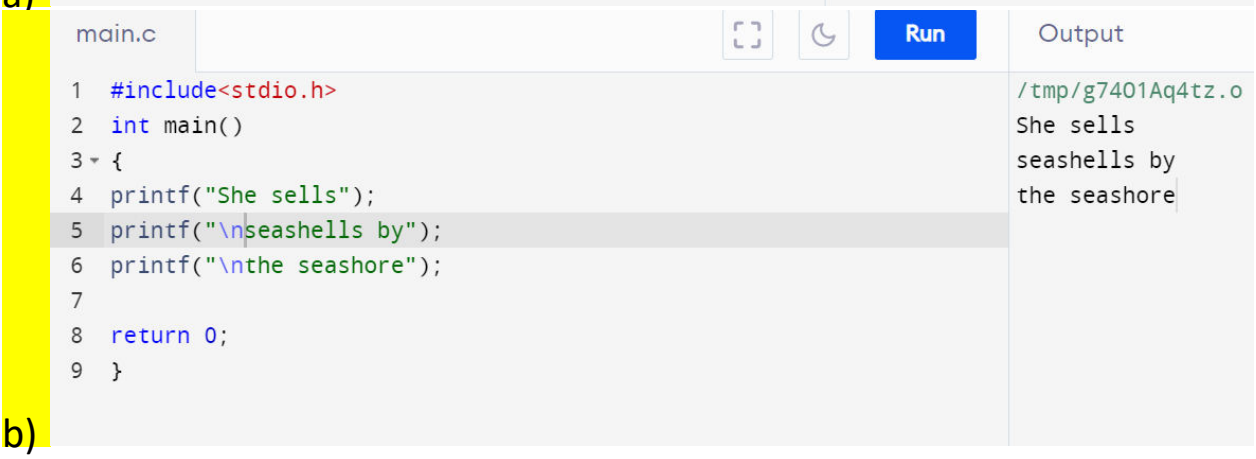
a) All in one line

b) In three lines

a)




b)




10. Mention the specific reasons for scanf() will stop in the program?

- scanf treats space as the end of the string. So it stops reading once it encounters a space character.
- We may've used the scanf inside a while loop or for loop or do while loop or if else statement or switch case statement or in a remote user defined function that doesn't satisfy the condition to enter into it.

Case study

#include <stdio.h>

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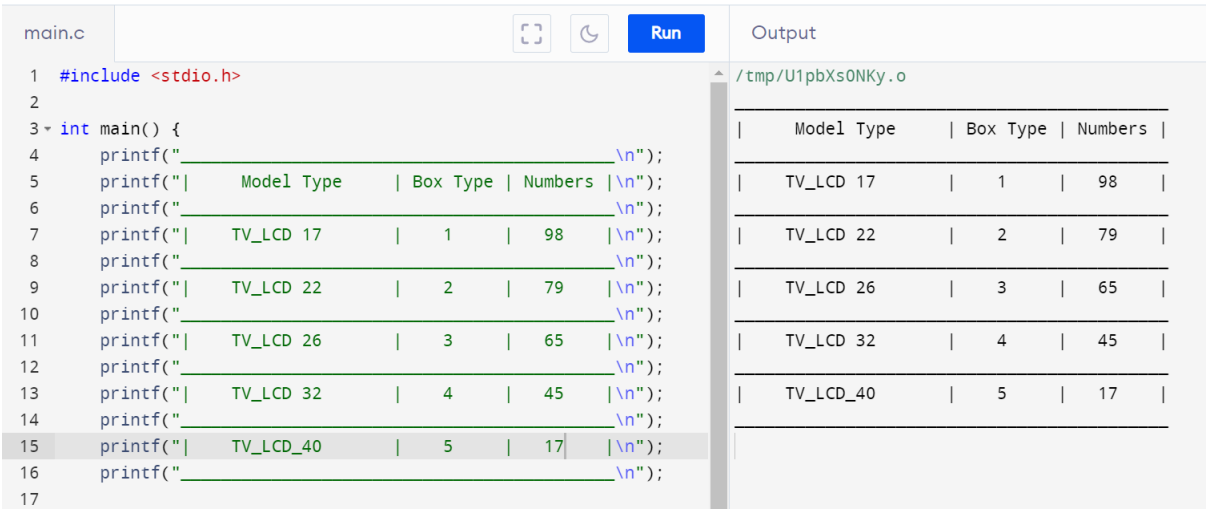
```
int main() {
   printf("                                                \n");
   printf("|    Model Type    | Box Type | Numbers |\n");
   printf("                                                \n");
   printf("|    TV_LCD 17     |    1     |   98    |\n");
   printf("                                                \n");
   printf("|    TV_LCD 22     |    2     |   79    |\n");
   printf("                                                \n");
   printf("|    TV_LCD 26     |    3     |   65    |\n");
   printf("                                                \n");
   printf("|    TV_LCD 32     |    4     |   45    |\n");
   printf("                                                \n");
   printf("|    TV_LCD_40     |    5     |   17    |\n");
   printf("                                                \n");

   return 0;
}
```

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