

Printf Scanf Assignment:

Mandatory:

Q1. WAP with

1a. function readdisplay() to read the following data types only one at a time at run time and to display.

1. char type
2. integer type
3. char array of maximum 80 characters
4. short type
5. float type

TestData:

'c', 8978, "hello", 8, 45.678

'H', 254, "hello Hi How", 256, 145.2678

1b. Create a copy of readdisplay() as function readdisplay2() with changes below

- Instead of reading 1 data at a time, read all inputs using a single scanf().

Test readdisplay2() by changing the read order. Do you observe any issue?

- A. The space or enter key is taken in buffer and the character is not read

1c. display the char array content in upper case.

1d. Add code to display the size of each data type mentioned in Q1a and sizeof the variables of each datatype ([You may refer sample code in data_type_size.c](#))

```
#include <stdio.h>

void readdisplay() {
    char c;
    int i;
    char str[81];
    short s;
    float f;
    {
        printf("Enter a character: ");
        scanf(" %c", &c);
        printf("You entered the character: %c\n", c);
    }
    {
        printf("Enter an integer: ");
```

```

scanf("%d", &i);
printf("You entered the integer: %d\n", i);
}
{
printf("Enter a string (max 80 characters): ");
scanf(" %80[^\n]", str);
printf("You entered the string: %s\n", str);
}
{
printf("Enter a short integer: ");
scanf("%hd", &s);
printf("You entered the short integer: %hd\n", s);
}
{
printf("Enter a floating-point number: ");
scanf("%f", &f);
printf("You entered the floating-point number: %.2f\n", f);
}
}

int main() {
readdisplay();
return 0;
}

```

OUTPUT:

```

c
c
10
10
hello
hello
20

```

20

40.44

40.44

Q2. Try to run the program with code snippet below. Check the output and analyse. Fix it to get correct result.

```
#include<stdio.h>

int main()
{
    unsigned long int ul = 200333333334340;
    printf("value is:%d\n", ul);
    return 0;
}
```

OUTPUT:

value is:200333333334340

Here we can observe that by giving %d as a format specifier we do not get the exact output as it is a long unsigned int. If we change the format specifier to %ld we get the exact output.