

Datatypes and Format Specifiers Assignment

1. WAP to read the following information at run time and to display. Choose appropriate data type and format specifier.
 1. username [maximum of length 125]
 2. age
 3. Salary [float]
 4. Designation code [as short type with values {1, 2, 3, 4, 5, 6}]
 5. Gender [a single char field]

Sol:

```
#include <stdio.h>
```

```
int main() {
```

```
    char username[126];
```

```
    int age;
```

```
    float salary;
```

```
    short designation_code;
```

```
    char gender;
```

```
    printf("Enter username (max 125 characters): ");
```

```
    scanf("%125[^\n]", username);
```

```
    printf("Enter age: ");
```

```
    scanf("%d", &age);
```

```
    printf("Enter salary: ");
```

```
    scanf("%f", &salary);
```

```
    printf("Enter designation code (1-6): ");
```

```
    scanf("%hd", &designation_code);
```

```
    printf("Enter gender (M/F): ");
```

```
    scanf(" %c", &gender);
```

```
    printf("\n--- Employee Information ---\n");
```

```
    printf("Username: %s\n", username);
```

```
    printf("Age: %d\n", age);
```

```

printf("Salary: %.2f\n", salary);
printf("Designation Code: %hd\n", designation_code);
printf("Gender: %c\n", gender);

return 0;
}

```

Output:

```

Enter username (max 125 characters): iswarya pothala
Enter age: 20
Enter salary: 300000.90
Enter designation code (1-6): 2
Enter gender (M/F): F

--- Employee Information ---
Username: iswarya pothala
Age: 20
Salary: 300000.91
Designation Code: 2
Gender: F

```

2. WAP to read a user choice as 'y' or 'Y' or 'n' or 'N' and display read choice as "Yes" or "No" according to the input received.
'y' or 'Y' → display "Yes"
'n' or 'N' → display "No"
for any other character received → display "invalid character" and exit

Sol:

```

#include <stdio.h>

int main() {
    char choice;

    printf("Enter your choice (y/Y for Yes, n/N for No): ");
    scanf("%c", &choice); // Read a single character

    if (choice == 'y' || choice == 'Y') {
        printf("Yes\n");
    }

    else if (choice == 'n' || choice == 'N') {
        printf("No\n");
    }

    else {
        printf("Invalid character\n");
    }
}

```

```

        return 1;

    return 0;
}

```

Output:

```

user57@trainux01:~/Batch17OCT2024/if_else$ vi datatype2.c
user57@trainux01:~/Batch17OCT2024/if_else$ gcc datatype2.c
user57@trainux01:~/Batch17OCT2024/if_else$ ./a.out
Enter your choice (y/Y for Yes, n/N for No): y
Yes

```

3. WAP to read a number in decimal (0-127) and display it in 2 digit hex characer.

Sol:

```

#include <stdio.h>

int main() {
    int decimal;

    printf("Enter a decimal number (0-127): ");

    scanf("%d", &decimal);

    if (decimal < 0 || decimal > 127) {
        printf("Invalid input. Please enter a number between 0 and 127.\n");
    } else {
        printf("The number in 2-digit hexadecimal is: %02X\n", decimal);
    }

    return 0;
}

```

Output:

```

Enter a decimal number (0-127): 7
The number in 2-digit hexadecimal is: 07
user57@trainux01:~/Batch17OCT2024/if_else$ ./a.out
Enter a decimal number (0-127): 56
The number in 2-digit hexadecimal is: 38

```

