UNIVERSITY OF THE PHILIPPINES VISAYAS
College of Arts and Sciences
Division of Physical Sciences and Mathematics

CMSC 21
Fundamentals of Programming
Second Semester AY 2021-2022

ASSIGNMENT: Lecture 02

Oath of Academic Integrity

As a student at the University of the Philippines, we pledge to act ethically and uphold the value of honor and excellence.

We understand that suspected misconduct on this assignment will be reported to the appropriate office and if established, will result in disciplinary action in accordance with University rules, policies, and procedures.

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Operators in C Lecture 2
Assignments

1. Code the following:

    a. Prompt the user to enter a two-digit number
    b. Display the number with the digits reversed

Program: ***Output:***

```c
#include <stdio.h>

int main() {

  int n, reverse = 0, remainder;

  printf("Please enter a 2-digit number: ");
  scanf("%d", &n);

   if (n < 10) {
      printf("Invalid Input! Number should have 2 digits");
   }

   else if (n > 99) {
      printf("Invalid Input! Number should have 2 digits only");
   }

    else {
       while (n != 0) {
          remainder = n % 10;
          reverse = reverse * 10 + remainder;
n /= 10;
       }
       printf("Reverse: %d", reverse);
   }

  return 0;
}
```

```
Please enter a 2-digit number: 75
Reverse: 57
[Program finished]
```

2. Extend the code in item 1, such that it reverses a 3-digit number.

Program: ***Output:***

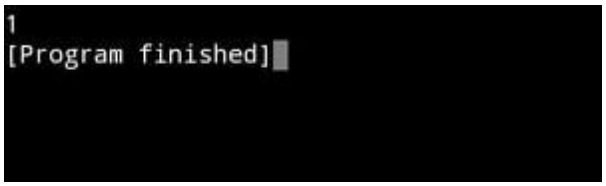
```c
#include <stdio.h>

int main() {

  int n, reverse = 0, remainder;

  printf("Please enter a 3-digit number: ");
  scanf("%d", &n);

  if (n < 100) {
   printf("Invalid Input! Number should have 3 digits");
  }

   else if (n > 999) {
      printf("Invalid Input! Number should have 3 digits only");
   }

   else {
      while (n != 0) {
         remainder = n % 10;
         reverse = reverse * 10 + remainder;
n /= 10;
       }

      printf("Reverse: %d", reverse);
   }

  return 0;
}
```

```
Please enter a 3-digit number: 123
Reverse: 321
[Program finished]
```

3. Provide the output of the following codes, given that i, j, and k are integer variables.

a)
```
i = 3; j = 4; k = 5;
printf("%d", i < j || ++j < k);
```

Output:



b)
```
i = 7; j = 8; k = 9;
printf("%d",i - 7 && j++ < k);
```

Output:

c)
```
i = 7; j = 8; k = 9;
printf("%d", (i = j) || (j == k));
printf("%d %d %d", i, j, k);
```

Output:

d)
```
i = j = k = 1;
printf("%d", ++i || ++j && ++k);
printf("%d %d %d", i, j, k);
```

Output: