Online Assignment on Function and Recursion (B2)

TIME: **25** Minutes Total Marks: **10** **CSE 102**

Solve the problem below. After you are done, rename the file containing your source code as your *StudentId.c* (For example, if your student ID is *2005001*, the name of your file should be *2005001.c*). Then submit that file to Moodle. Make sure you submit a file containing your source code.

***Failure to follow these instructions will result in penalties.**

Problem Description

1. Write a **C** program that has a **recursive function** named "***remove_n_digits***" that removes the **last** "***c***" occurrences of a digit "***d***" from an integer "***n***". [10]

Function Prototype & Sample Call

```
int remove_n_digits(int n, int d, int c)
{
   // TODO
}

// result = 7901510
int result = remove_n_digits(79015910, 9, 1);
```

Sample Calls to Function	*Sample Return Value*
remove_n_digits(79015**9**10, **9**, 1)	7901510
remove_n_digits(7**9**015**9**10, **9**, 2)	701510
remove_n_digits(**777**, **7**, 4)	0
remove_n_digits(777, **5**, 4)	777
remove_n_digits(123**4**5, **4**, 3)	1235

N.B.:

- ★ You ***must*** use recursion to implement this function. In particular, your function ***can not*** contain the keywords ***for*** or ***while*** in its body.
- ★ Your ***main*** function ***can not*** have any other processing statements except for taking input, calling the function and displaying output.
- ★ You ***can not*** use any library function for this task (other than **I/O**).
- ★ You ***can not*** use any **array** or **pointer** while solving this problem.
- ★ You ***can*** assume that the provided input will ***always*** be valid.