**CSE 102 Online (A2)**

**Topic: Structure & Pointer**

1. Consider the following C structure which stores dates.

struct Date

{

int day;

int month;

int year;

};

Now, implement the following three functions.

1. **void print (Date date)**: This function prints a date in the format dd/mm/yyyy.
2. **int difference (Date date1, Date date2)**: This function calculates the difference between two dates (in days) and returns the difference.
3. **Date newDate (Date date, int adddays)**: This function adds the given number of days to a date and returns the new date.

**Input**: Three integers representing **date1**, followed by three integers representing **date2**, followed by one integer representing **adddays**.

**Output:** Result of the functions **difference (date1, date2)** and **newDate (date1, adddays)**. The output of **newDate** should be printed using the function **print** defined above.

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| --- | --- |
| Sample input | Corresponding output |
| 1 12 2020 6 12 2020 4 | 5 5/12/2020 |
| 30 1 2021 28 1 2021 5 | 2 4/2/2020 |

1. Implement the following function:

**char \*removesubstring (char \*s1, char \*s2, int n)**

The function has to produce a new character string by removing a substring of s2 (which starts from position n of s2) from the string s1. **If there are multiple occurrences of this substring in s1, all instances should be removed.** Assume that, n will always be a valid integer from 0 to strlen(s2). The return value of the function should be a pointer to the newly constructed string.

Restrictions:

1. You have to use dynamic memory allocation and pointer syntax.
2. You cannot use any library function from string.h other than strlen.

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| Sample input | Corresponding output |
| BAEUETAE AE 0 | BUET |
| BUETCSE CSE 1 | BUETC |
| BUET CSE 0 | BUET |