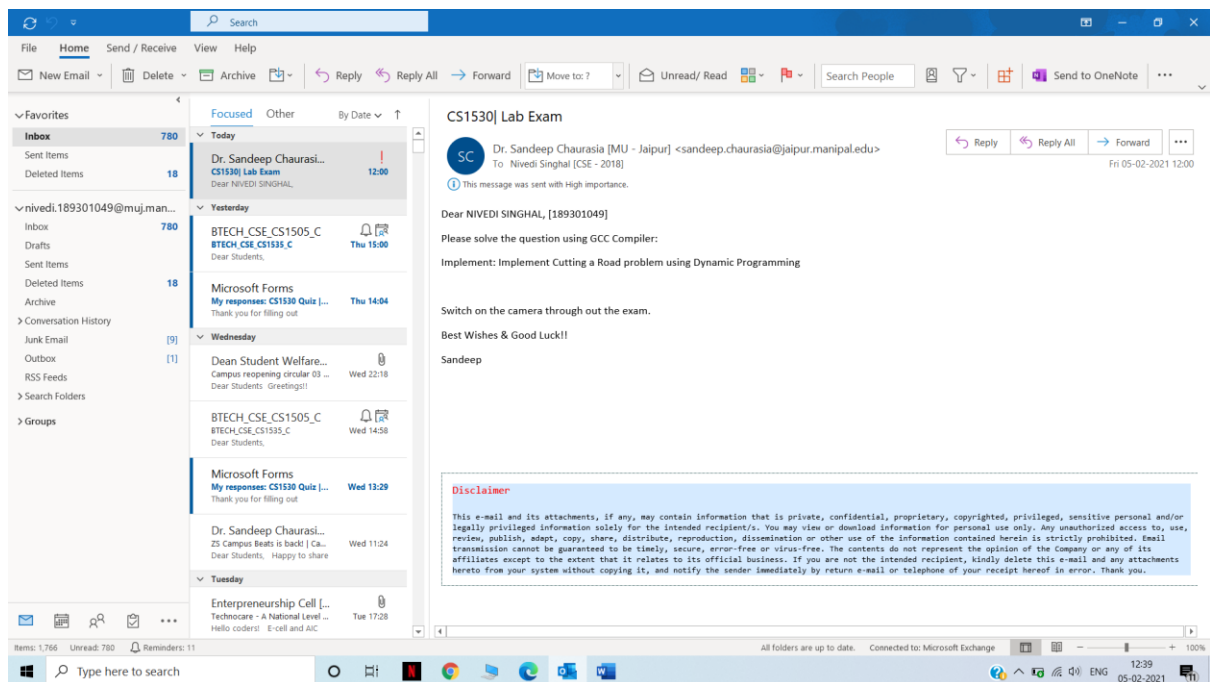


DAA ETE LAB

NIVEDI SINGHAL

189301049

CSE C



Source Code

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

```
#define MAX(x, y) (((x) > (y)) ? (x) : (y))
```

```
const int temp = 1000;
```

```
int arr[5+1];
```

```
void fill() {
```

```
    int i;
```

```
    arr[0] = 0;
```

```
    for(i=1; i<=5; i++) {
```

```

        arr[i] = -1*temp;
    }
}

int road(int c[], int n) {
    if (arr[n] >= 0) {
        return arr[n];
    }

    int maximum_revenue = -1*temp;
    int i;

    for(i=1; i<=n; i++) {
        maximum_revenue = MAX(maximum_revenue, c[i] + road(c, n-i));
    }

    arr[n] = maximum_revenue;
    return arr[n];
}

int main() {
    fill();

    int price[] = {0, 10, 24, 30, 40, 45};
    printf("%d\n", road(price, 5));
    return 0;
}

```

OUTPUT:

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main.c

```

7: void fill() {
8:     int i;
9:     arr[0] = 0;
10:    for(i=1; i<=5; i++) {
11:        arr[i] = -1*temp;
12:    }
13: }
14:
15: int road(int c[], int n) {
16:     if (arr[n] >= 0) {
17:         return arr[n];
18:     }
19:
20:     int maximum_revenue = -1*temp;
21:     int i;
22:
23:     for(i=1; i<=n; i++) {
24:         maximum_revenue = MAX(maximum_revenue, c[i] + road(c, n-1));
25:     }
26:
27:     arr[n] = maximum_revenue;
28:     return arr[n];
29: }
30:
31: int main() {
32:     fill();
33:
34:     int price[] = {0, 10, 20, 30, 40, 45};
35:     printf("%d\n", road(price, 5));
36:     return 0;
37: }

```

input

...Program finished with exit code 0
Press ENTER to exit console.

Call Stack

#	Function	File	Line
1	main	main.c	31

Local Variables

Variable	Value
arr	0

Registers

Register	Value
%eax	0

Display Expressions

Expression	Value
arr[n]	0

Enter expression to watch

Breakpoints and Watchpoints

#	Description
---	-------------

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Breakpoints and Watchpoints

#	Description
---	-------------

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Language: C

```
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```

input

...Program finished with exit code 0
Press ENTER to exit console.

Call Stack
Function File Line

Local Variables
Variable Value

Registers
Register Value

Display Expressions
Expression Value

Breakpoints and Watchpoints
Description

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