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Msc Computer Science

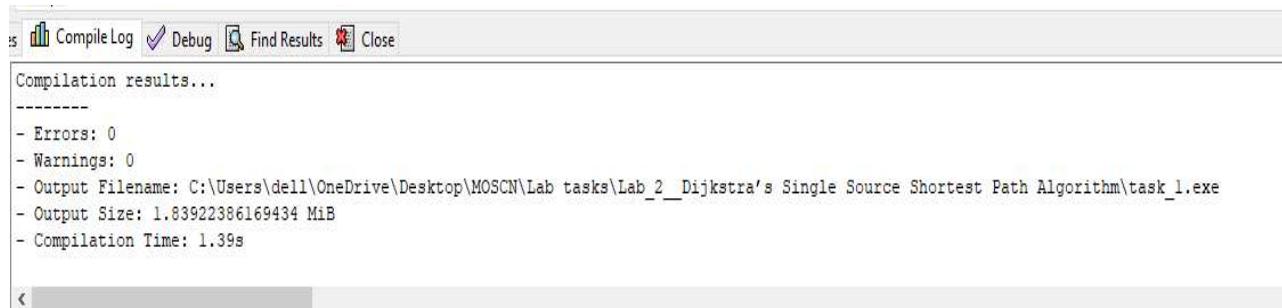
Assignment-3

Task:1

Problem-01:

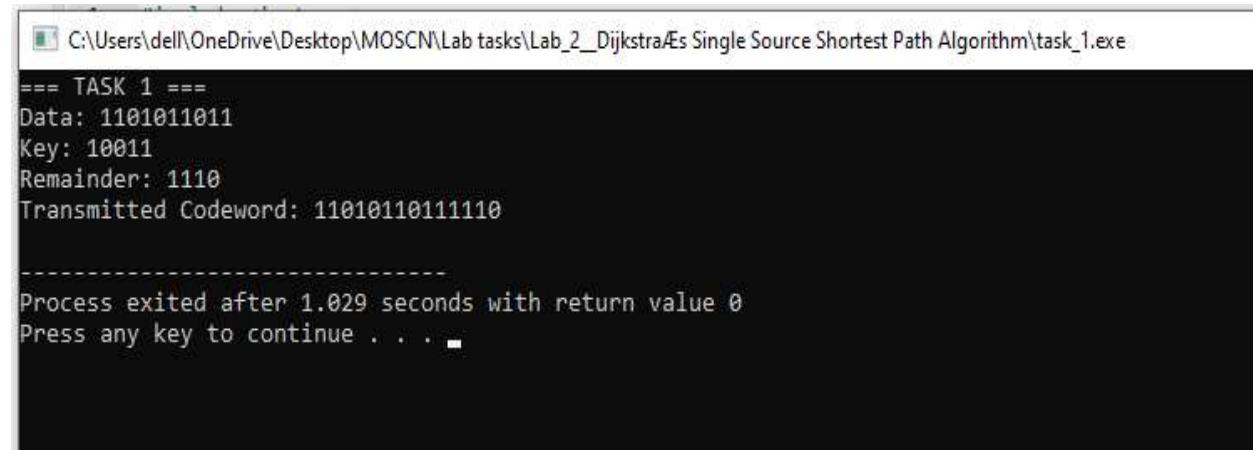
A bit stream 1101011011 is transmitted using the standard CRC method. The generator polynomial is x^4+x+1 . What is the actual bit string transmitted?

Compilation Result:



```
Compile Log Debug Find Results Close
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\dell\OneDrive\Desktop\MOSCN\Lab tasks\Lab_2__Dijkstra's Single Source Shortest Path Algorithm\task_1.exe
- Output Size: 1.83922386169434 MiB
- Compilation Time: 1.39s
```

Output:



```
C:\Users\dell\OneDrive\Desktop\MOSCN\Lab tasks\Lab_2__Dijkstra's Single Source Shortest Path Algorithm\task_1.exe
== TASK 1 ==
Data: 1101011011
Key: 10011
Remainder: 1110
Transmitted Codeword: 11010110111110

-----
Process exited after 1.029 seconds with return value 0
Press any key to continue . . .
```

Task:2

Problem-02:

A bit stream 10011101 is transmitted using the standard CRC method. The generator polynomial is x^3+1 .

1. What is the actual bit string transmitted?
2. Suppose the third bit from the left is inverted during transmission. How will receiver detect this error?

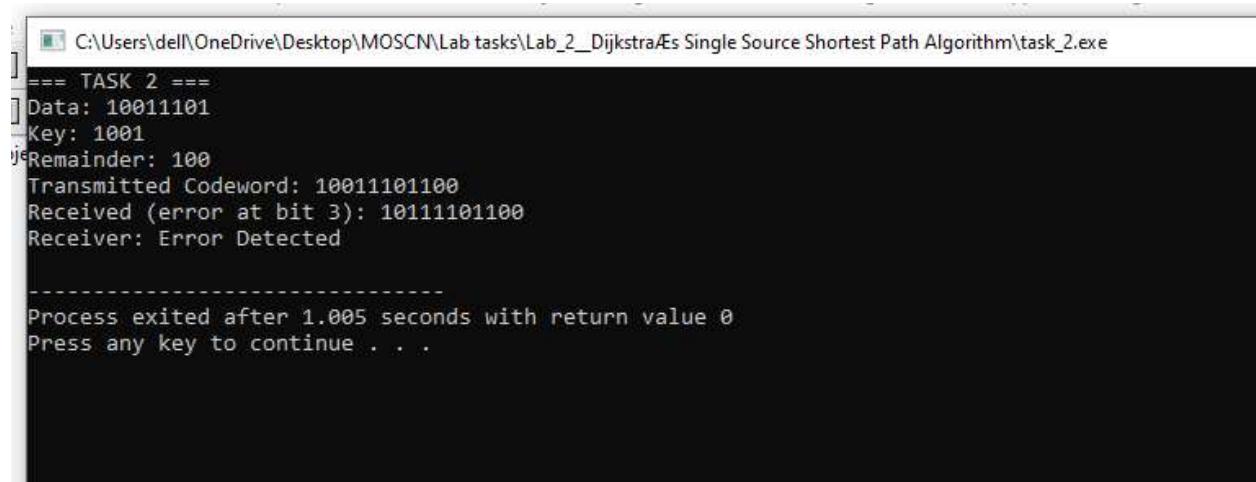
Compilation Result:



The screenshot shows a software window with a toolbar at the top containing 'Sources', 'Compile Log' (selected), 'Debug', 'Find Results', and 'Close'. The main area displays the following compilation results:

```
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\dell\OneDrive\Desktop\MOSCN\Lab tasks\Lab_2_Dijkstra's Single Source Shortest Path Algorithm\task_2.exe
- Output Size: 1.83975028991699 MiB
- Compilation Time: 1.41s
```

Output:



The screenshot shows a terminal window with the following output:

```
C:\Users\dell\OneDrive\Desktop\MOSCN\Lab tasks\Lab_2_Dijkstra's Single Source Shortest Path Algorithm\task_2.exe
==== TASK 2 ====
Data: 10011101
Key: 1001
Remainder: 100
Transmitted Codeword: 10011101100
Received (error at bit 3): 10111101100
Receiver: Error Detected

-----
Process exited after 1.005 seconds with return value 0
Press any key to continue . . .
```