

Task Outputs. Also found in Task folders.

Task 1 Output:

```
Terminal
File Edit View Search Terminal Help
daniel@daniel-W35xSS-370SS ~/Documents/Operating_Systems/Homework3/Task1 $ time
./Sum-offset_Task1
Sum = 500000

real    0m0.006s
user    0m0.004s
sys     0m0.000s
daniel@daniel-W35xSS-370SS ~/Documents/Operating_Systems/Homework3/Task1 $
```

Task 2 Output:

```
Terminal
File Edit View Search Terminal Help
daniel@daniel-W35xSS-370SS ~/Documents/Operating_Systems/Homework3/Task2 $ time
./Sum-offset Task2
Sum = 500000000

real    0m0.005s
user    0m0.008s
sys     0m0.000s
daniel@daniel-W35xSS-370SS ~/Documents/Operating_Systems/Homework3/Task2 $
```

Task 3 Output:

```
Terminal
File Edit View Search Terminal Help
daniel@daniel-W35xSS-370SS ~/Documents/Operating_Systems/Homework3/Task3 $ time
./Sum-offset_Task3
Sum = 50000000

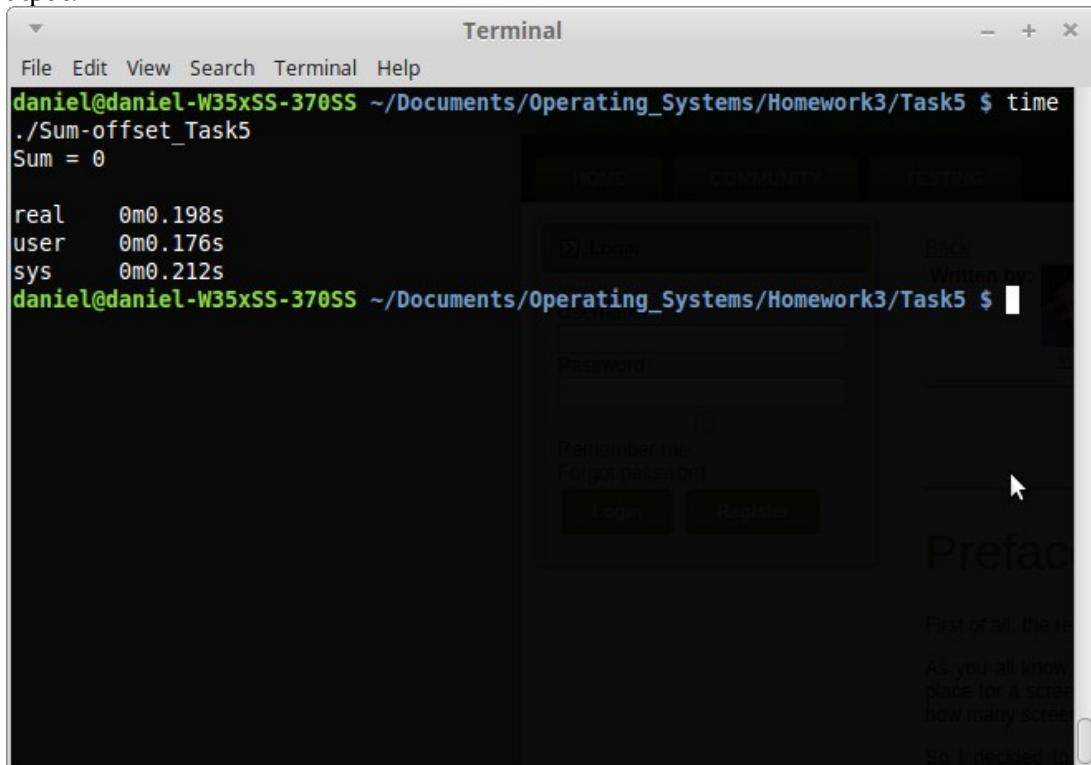
real    0m0.006s
user    0m0.004s
sys     0m0.000s
daniel@daniel-W35xSS-370SS ~/Documents/Operating_Systems/Homework3/Task3 $
```

Task 4 Output:

```
Terminal
File Edit View Search Terminal Help
daniel@daniel-W35xSS-370SS ~/Documents/Operating_Systems/Homework3/Task4 $ time
./Sum-offset_Task4
Sum = 498602

real    0m0.016s
user    0m0.028s
sys     0m0.000s
daniel@daniel-W35xSS-370SS ~/Documents/Operating_Systems/Homework3/Task4 $
```

Task 5 Output:



```
Terminal
File Edit View Search Terminal Help
daniel@daniel-W35xSS-370SS ~/Documents/Operating_Systems/Homework3/Task5 $ time
./Sum-offset_Task5
Sum = 0

real    0m0.198s
user    0m0.176s
sys     0m0.212s
daniel@daniel-W35xSS-370SS ~/Documents/Operating_Systems/Homework3/Task5 $
```

The image shows a terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help). The prompt is "daniel@daniel-W35xSS-370SS" and the current directory is "~/Documents/Operating_Systems/Homework3/Task5". The user runs the command "time ./Sum-offset_Task5". The program outputs "Sum = 0". The timing statistics are displayed as follows:

Category	Time
real	0m0.198s
user	0m0.176s
sys	0m0.212s

The prompt then changes to "daniel@daniel-W35xSS-370SS" and the user enters a new command, which is partially visible as "\$".

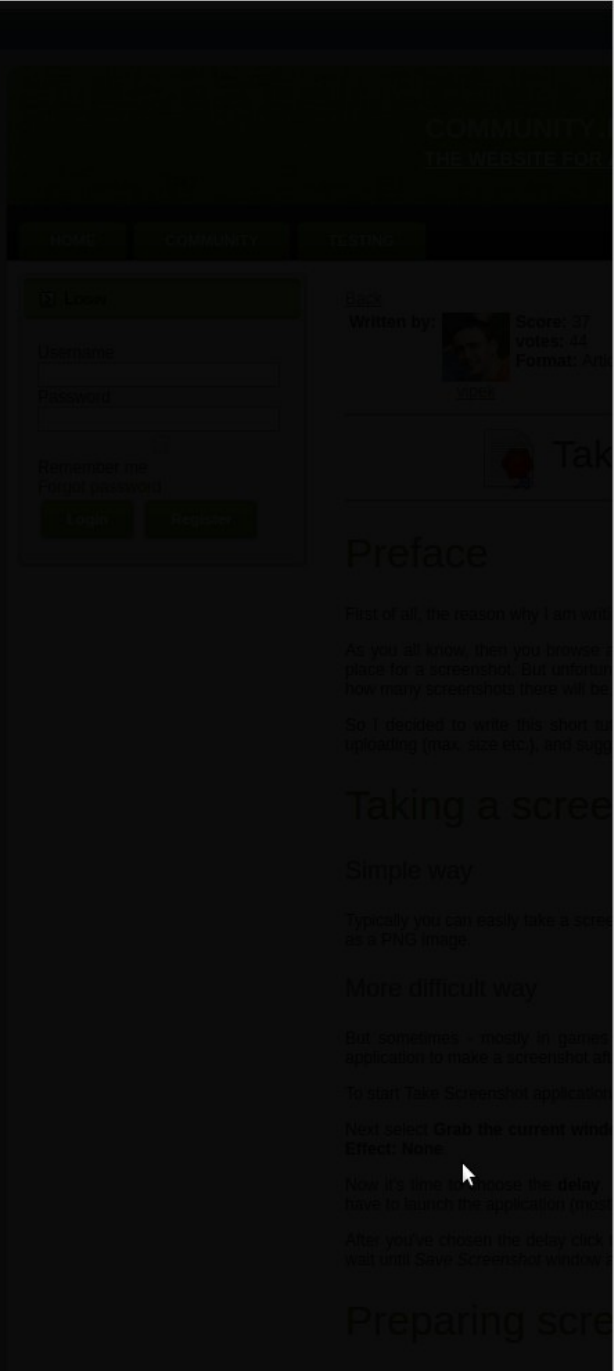
For Task 6, the critical section was the variable “count”.

Task 6-7 Output Part 1:

The image is a side-by-side comparison of a terminal window and a web browser. The terminal window on the left shows a C program being executed. The program's output consists of a series of messages from a consumer and a producer, indicating that the consumer is always faster than the producer. The producer's count increases from 1 to 14 over 14 iterations. The web browser on the right displays a login page for 'The Website' with fields for username and password, and a 'Log in' button. Below the login form is a 'Preface' section of a document titled 'Taking a screenshot', which discusses the difficulty of taking screenshots in games and provides instructions on how to use the 'Take Screenshot' application.

Task 6-7 Output Part 2:

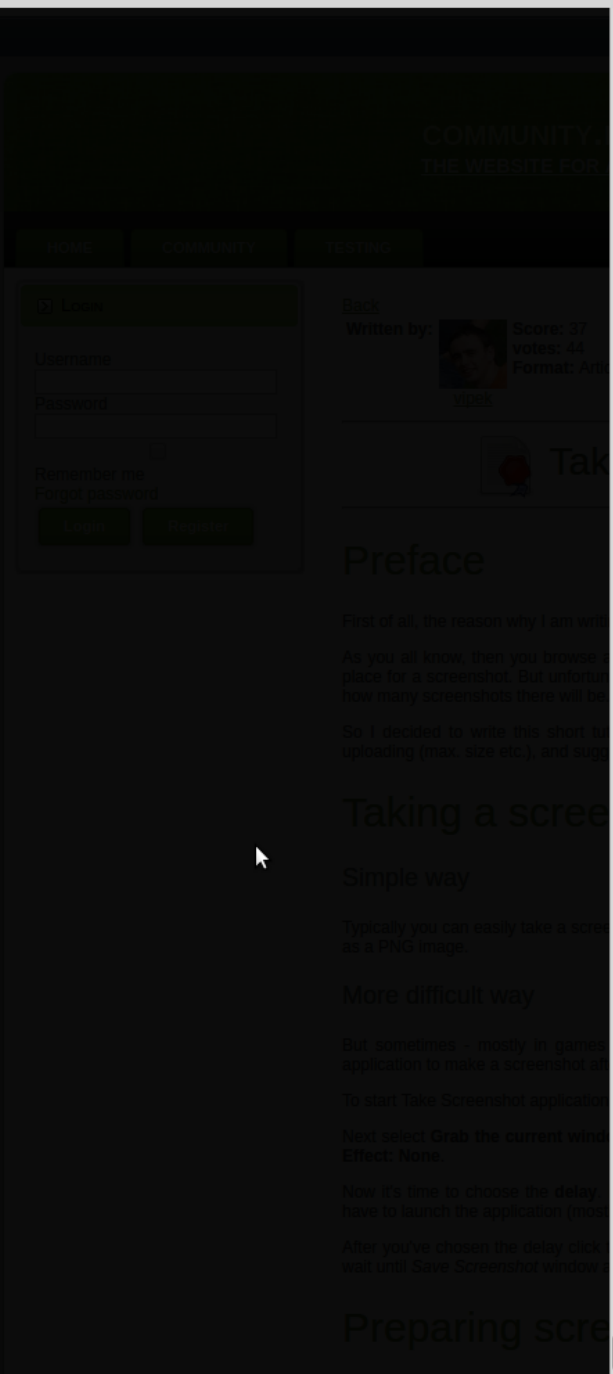
```
Terminal
File Edit View Search Terminal Help
Count = 45 in produced at Iteration = 1
Count = 46 in produced at Iteration = 1
Count = 47 in produced at Iteration = 1
Count = 48 in produced at Iteration = 1
Count = 49 in produced at Iteration = 1
Count = 50 in produced at Iteration = 1
Count = 51 in produced at Iteration = 1
Count = 52 in produced at Iteration = 1
Count = 53 in produced at Iteration = 1
Count = 54 in produced at Iteration = 1
Count = 55 in produced at Iteration = 1
Count = 56 in produced at Iteration = 1
Count = 57 in produced at Iteration = 1
Count = 58 in produced at Iteration = 1
Count = 59 in produced at Iteration = 1
Count = 60 in produced at Iteration = 1
Count = 61 in produced at Iteration = 1
Count = 62 in produced at Iteration = 1
Count = 63 in produced at Iteration = 1
Count = 64 in produced at Iteration = 1
Count = 65 in produced at Iteration = 1
Count = 66 in produced at Iteration = 1
Count = 67 in produced at Iteration = 1
Count = 68 in produced at Iteration = 1
Count = 69 in produced at Iteration = 1
Count = 70 in produced at Iteration = 1
Count = 71 in produced at Iteration = 1
Count = 72 in produced at Iteration = 1
Count = 73 in produced at Iteration = 1
Count = 74 in produced at Iteration = 1
Count = 75 in produced at Iteration = 1
Count = 76 in produced at Iteration = 1
Count = 77 in produced at Iteration = 1
Count = 78 in produced at Iteration = 1
Count = 79 in produced at Iteration = 1
Count = 80 in produced at Iteration = 1
Count = 81 in produced at Iteration = 1
Count = 82 in produced at Iteration = 1
Count = 83 in produced at Iteration = 1
Count = 84 in produced at Iteration = 1
Count = 85 in produced at Iteration = 1
Count = 86 in produced at Iteration = 1
Count = 87 in produced at Iteration = 1
Count = 88 in produced at Iteration = 1
Count = 89 in produced at Iteration = 1
Count = 90 in produced at Iteration = 1
Count = 91 in produced at Iteration = 1
Count = 92 in produced at Iteration = 1
Count = 93 in produced at Iteration = 1
Count = 94 in produced at Iteration = 1
Count = 95 in produced at Iteration = 1
Count = 96 in produced at Iteration = 1
Count = 97 in produced at Iteration = 1
Count = 98 in produced at Iteration = 1
Count = 99 in produced at Iteration = 1
Count = 100 in produced at Iteration = 1
Count = 101 in produced at Iteration = 1
consumer made to wait...faster than producer.
```



The screenshot shows a web browser window with a dark theme. The page appears to be a forum or documentation site. At the top, there's a navigation bar with links like 'HOME', 'COMMUNITY', and 'THE WIKI'. Below that, there's a section for a user profile or post header, including a 'Back' link, 'Written by:' with a user avatar, and statistics like 'Score: 37', 'votes: 44', and 'Format: Auto'. The main content area has a heading 'Preface' followed by a paragraph: 'First of all, the reason why I am writing this is because you all know, then you browse a place for a screenshot. But unfortunately, how many screenshots there will be. So I decided to write this short guide on uploading (max. size etc), and saving'. Below this, there's another heading 'Taking a screenshot' followed by a sub-heading 'Simple way'. The text continues: 'Typically you can easily take a screenshot as a PNG image.' Then, another sub-heading 'More difficult way' is shown, followed by text: 'But sometimes - mostly in games, application to make a screenshot of. To start Take Screenshot application. Next select Grab the current window. Effect: None. Now it's time to choose the delay. have to launch the application (most. After you've chosen the delay click wait until Save Screenshot window is'. The bottom of the screenshot shows the start of a new section 'Preparing screenshot'.

Task 6-7 Output Part 3:

```
Terminal
File Edit View Search Terminal Help
Count = 99 in produced at Iteration = 1
Count = 100 in produced at Iteration = 1
Count = 101 in produced at Iteration = 1
consumer made to wait...faster than producer.
Count = 101 in consumer at Iteration = 99
Count = 100 in consumer at Iteration = 98
Count = 99 in consumer at Iteration = 97
Count = 98 in consumer at Iteration = 96
Count = 97 in consumer at Iteration = 95
Count = 96 in consumer at Iteration = 94
Count = 95 in consumer at Iteration = 93
Count = 94 in consumer at Iteration = 92
Count = 93 in consumer at Iteration = 91
Count = 92 in consumer at Iteration = 90
Count = 91 in consumer at Iteration = 89
Count = 90 in consumer at Iteration = 88
Count = 89 in consumer at Iteration = 87
Count = 88 in consumer at Iteration = 86
Count = 87 in consumer at Iteration = 85
Count = 86 in consumer at Iteration = 84
Count = 85 in consumer at Iteration = 83
Count = 84 in consumer at Iteration = 82
Count = 83 in consumer at Iteration = 81
Count = 82 in consumer at Iteration = 80
Count = 81 in consumer at Iteration = 79
Count = 80 in consumer at Iteration = 78
Count = 79 in consumer at Iteration = 77
Count = 78 in consumer at Iteration = 76
Count = 77 in consumer at Iteration = 75
Count = 76 in consumer at Iteration = 74
Count = 75 in consumer at Iteration = 73
Count = 74 in consumer at Iteration = 72
Count = 73 in consumer at Iteration = 71
Count = 72 in consumer at Iteration = 70
Count = 71 in consumer at Iteration = 69
Count = 70 in consumer at Iteration = 68
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Count = 55 in consumer at Iteration = 53
Count = 54 in consumer at Iteration = 52
Count = 53 in consumer at Iteration = 51
Count = 52 in consumer at Iteration = 50
Count = 51 in consumer at Iteration = 49
Count = 50 in consumer at Iteration = 48
Count = 49 in consumer at Iteration = 47
Count = 48 in consumer at Iteration = 46
```



The screenshot shows a web browser window with a dark theme. On the left is a login form with fields for 'Username' and 'Password', a 'Remember me' checkbox, and 'Login' and 'Forgot password' buttons. On the right is a blog post titled 'Preface' by a user named 'vibes' with a score of 37 and 44 votes. The post content includes the text 'First of all, the reason why I am writing this is...' and 'As you all know, then you browse a place for a screenshot. But unfortunately how many screenshots there will be...'. Below the text are sections titled 'Taking a screenshot' and 'Simple way', followed by 'More difficult way' and 'Preparing screenshot'.

Task 6-7 Output Part 4:

```
Terminal
File Edit View Search Terminal Help

Count = 51 in consumer at Iteration = 49
Count = 50 in consumer at Iteration = 48
Count = 49 in consumer at Iteration = 47
Count = 48 in consumer at Iteration = 46
Count = 47 in consumer at Iteration = 45
Count = 46 in consumer at Iteration = 44
Count = 45 in consumer at Iteration = 43
Count = 44 in consumer at Iteration = 42
Count = 43 in consumer at Iteration = 41
Count = 42 in consumer at Iteration = 40
Count = 41 in consumer at Iteration = 39
Count = 40 in consumer at Iteration = 38
Count = 39 in consumer at Iteration = 37
Count = 38 in consumer at Iteration = 36
Count = 37 in consumer at Iteration = 35
Count = 36 in consumer at Iteration = 34
Count = 35 in consumer at Iteration = 33
Count = 34 in consumer at Iteration = 32
Count = 33 in consumer at Iteration = 31
Count = 32 in consumer at Iteration = 30
Count = 31 in consumer at Iteration = 29
Count = 30 in consumer at Iteration = 28
Count = 29 in consumer at Iteration = 27
Count = 28 in consumer at Iteration = 26
Count = 27 in consumer at Iteration = 25
Count = 26 in consumer at Iteration = 24
Count = 25 in consumer at Iteration = 23
Count = 24 in consumer at Iteration = 22
Count = 23 in consumer at Iteration = 21
Count = 22 in consumer at Iteration = 20
Count = 21 in consumer at Iteration = 19
Count = 20 in consumer at Iteration = 18
Count = 19 in consumer at Iteration = 17
Count = 18 in consumer at Iteration = 16
Count = 17 in consumer at Iteration = 15
Count = 16 in consumer at Iteration = 14
Count = 15 in consumer at Iteration = 13
Count = 14 in consumer at Iteration = 12
Count = 13 in consumer at Iteration = 11
Count = 12 in consumer at Iteration = 10
Count = 11 in consumer at Iteration = 9
Count = 10 in consumer at Iteration = 8
Count = 9 in consumer at Iteration = 7
Count = 8 in consumer at Iteration = 6
Count = 7 in consumer at Iteration = 5
Count = 6 in consumer at Iteration = 4
Count = 5 in consumer at Iteration = 3
Count = 4 in consumer at Iteration = 2
Count = 3 in consumer at Iteration = 1
Count = 2 in consumer at Iteration = 0
Count = 1 in consumer at Iteration = -1
consumer made to wait...faster than producer.
All items produced are consumed by the consumer

real    0m0.004s
user    0m0.000s
sys     0m0.004s
daniel@daniel-W35xSS-370SS ~/Documents/Operating_Systems/Homework3/Task6-7 $
```

