Week 2: Assignment 2
An attempt to copy a CS101 Assignment

[*Last Updated on:* ***11th April 2021, 23:00 Hrs***]

Aim

Your friend has completed his CS101 assignment and you feel numb that you could not even started it. In the end, you are just bothered with marks and simply want to come crawling out of the course.

After getting a papercut you have decided to get it from him over e-mail, and not write it down.

You are dead from the inside and breaking the habit of being able to copy an assignment and/or thinking what I've done after every submission, is getting harder day by day.

"*The first step to copying an assignment is ensuring you do not get caught when you submit it; the little things give you away.*"

You want to remove all the comments from his assignment to get one step closer to the submission. [We won't mind if the readme of this assignment contains the name of "you-know-what" we are referring to in the text above" ;)]

> **Strong disclaimer:** We do not encourage you to copy assignments at all.
>
> In the words of Arnab Goswami - "**Never ever! Ever Ever!**"

Write a SED script `assignment2.sed` which cleans both kinds of comments from the `.c` file:

- `//` - single line
- `/* */` - multi line

and prints the cleaned code on the Terminal (*no printing in a separate file; no output file to be generated*).

Given

Two files are provided to solve this assigment.

- Skeleton program file: `assignment2.sed`
- Sample C file: `assignment2_sample.c`

Procedure

- Open the skeleton program file, **`assignment2.sed`** .
- To run and debug your solution, type the below command in Terminal:

  ```
  sed -f assignment2.sed assignment2_sample.c
  ```

  This command will run the SED script **`assignment2.sed`** with the input argument of provided C file.
- Here file name is passed as **an argument and not as an input stream**.
- **NOTE:** Cleaning, here means that the comments should be deleted i.e. replace them with nothing. Don't replace them with spaces or newlines.
- Refer the **Expected Output** section below and debug your code to get the correct output.

Expected Output

- The provided sample C file, **`assignment2_sample.c`** consists of random C code.
- For example, the contents of this C file are as shown below:

  ```
  #include <stdio.h>

  int main()
  {
      // this is a dummy function
      float sum = 0;
      // testing the sed commands
      /* */
      int x = 6; // single-line comment
      x = x + 5;
      //
      char y = 'n';
      /* end of c
      file */
  }
  ```

- The expected output of program **`assigment2.sed`** i.e., print the cleaned code on Terminal as shown below:

  ```
  #include <stdio.h>

  int main()
  {
      *
      float sum = 0;*
      *
      *
      int x = 6; *
      x = x + 5;*
      *
      char y = 'n';*
  *
  *
  }
  ```

NOTE:

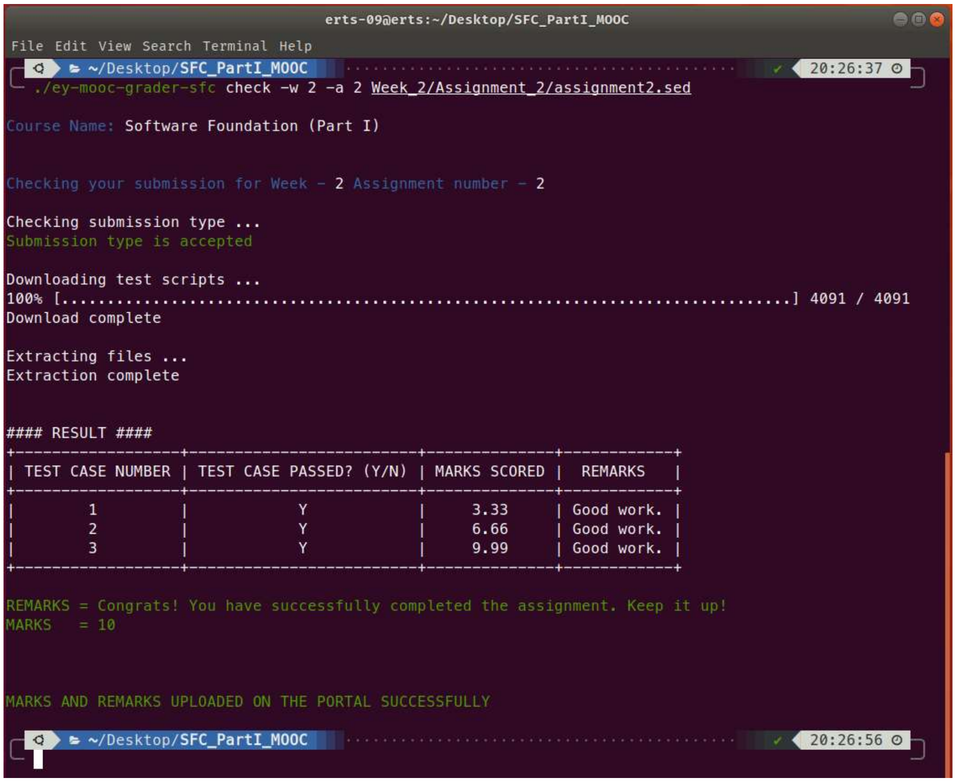
- In the above Expected Output the position of sign `*` are added manually to represent the **End-Of-Line (EOL)** for each statment inside the main function and are not the part of the actual output.
- In other words, your solution ***should not hamper the spaces and tabs in the original C file***.
- For example, line 9 must have an extra space in Expected Output after `int x = 6;` as in the original C file, the comment `// single-line comment` at the same line was starting with a space after the semi-colon sign (`;`).

Grading and Submission Instructions

- Navigate to the folder where the ***ey-mooc-grader-sfc*** application resides.
- To grade your solution, run the `check` command of the application as follows:

```
./ey-mooc-grader-sfc check -w 2 -a 2 Week_2/Assignment_2/assignment2.sed
```

- This will run your program `assignment2.sed` against random test cases and grade it. Marks and appropriate remarks will be provided as shown in Figure 1.
- Your program file `assignment2.sed` , marks scored and remarks will get uploaded to the MOOC portal.



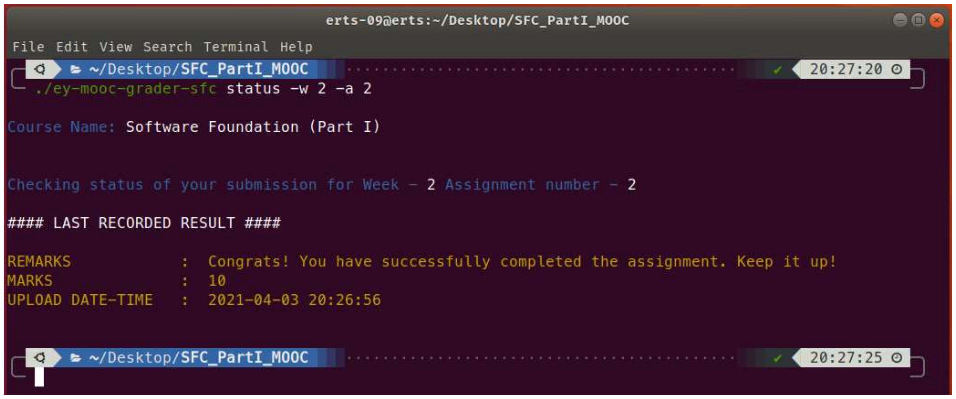
erts-09@erts:~/Desktop/SFC_PartI_MOOC
File Edit View Search Terminal Help

```
 ~/Desktop/SFC_PartI_MOOC .......................................... ✓ 20:26:37
./ey-mooc-grader-sfc check -w 2 -a 2 Week_2/Assignment_2/assignment2.sed

Course Name: Software Foundation (Part I)


Checking your submission for Week - 2 Assignment number - 2

Checking submission type ...
Submission type is accepted

Downloading test scripts ...
100% [..............................................................................] 4091 / 4091
Download complete

Extracting files ...
Extraction complete


#### RESULT ####
+------------------+-------------------------+--------------+------------+
| TEST CASE NUMBER | TEST CASE PASSED? (Y/N) | MARKS SCORED |  REMARKS   |
+------------------+-------------------------+--------------+------------+
|        1         |            Y            |     3.33     | Good work. |
|        2         |            Y            |     6.66     | Good work. |
|        3         |            Y            |     9.99     | Good work. |
+------------------+-------------------------+--------------+------------+

REMARKS = Congrats! You have successfully completed the assignment. Keep it up!
MARKS   = 10



MARKS AND REMARKS UPLOADED ON THE PORTAL SUCCESSFULLY

 ~/Desktop/SFC_PartI_MOOC .......................................... ✓ 20:26:56
```

Figure 1: Output of running check command for Week 2 Assignment 2

- You can verify this by running the `status` command of the application as given below, refer Figure 2.

```
./ey-mooc-grader-sfc status -w 2 -a 2
```


erts-09@erts:~/Desktop/SFC_PartI_MOOC
File Edit View Search Terminal Help

```
 ~/Desktop/SFC_PartI_MOOC ·········································· ✓ 20:27:20
 ./ey-mooc-grader-sfc status -w 2 -a 2

Course Name: Software Foundation (Part I)


Checking status of your submission for Week - 2 Assignment number - 2

#### LAST RECORDED RESULT ####

REMARKS           :  Congrats! You have successfully completed the assignment. Keep it up!
MARKS             :  10
UPLOAD DATE-TIME  :  2021-04-03 20:26:56


 ~/Desktop/SFC_PartI_MOOC ·········································· ✓ 20:27:25
```

Figure 2: Output of running status command for Week 2 Assignment 2

References

- Nano Editor
  - How to use Nano Text Editor
  - Nano Editor Official Docs
- Vim Editor
  - Interactive Vim Tutorial
- SED
  - Manual with Examples
  - SED: Introduction and Tutorial
  - Very Useful Command Line Utilities
  - Linux Command Line and Shell Scripting Bible (Page 420 and 430)
  - SED AWK Examples by Unix School

All The Best!