StaticVariables

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1 Static Variables

https://www.geeksforgeeks.org/static-variables-in-c/

1.1 Table of Contents

- Section **??**

1.2 Headers and helper functions

- run include headers and helper function cells if Kernel crashes or is restarted

```
[4]: // headers required in this notebook demo codes
#include <iostream>
#include <string>

using namespace std;
```

2 Static variables

- as opposed to auto variables, static variables' value "stick" or preserve even after they're out of their scope
- once the static variables are initialized, they're not reinitialized in the subsequent calls
- static variables if initialized are stored in data segment (see Memory Segments)
- it static variables are not explictly initialized, they're 0 initialized and stored in BSS segment
- syntax:

  static type varName;

```
[2]: void someFunction() {
    static int count = 0; // local scope; but store in BSS segment
    int num = 0;
    num++;
    count++;
    cout << "num = " << num << endl;
    cout << "count = " << count << endl;
}
```

```
[8]: // can't access count from anywhere but from inside someFunction !
     //cout << count << endl;
```

```
[3]: someFunction();
```

```
num = 1
count = 1
```

```
[ ]: someFunction();
```

2.0.1 visualize using pythontutor.com

https://goo.gl/p3YVGP

```
[ ]:
```