SE ASSIGNMENT - 2

U19CS082
SOURABH PATEL

Question 1: Write a C program having some global variables that are declared but not used anywhere in the code. Run Splint for this C code and report the error generated.

```c
#include<stdio.h>
int a,b;
int main(){
    printf("Hello");
    return 0;
}
```

```
PS D:\1. LABS\SE> cd "d:\1. LABS\SE\" ; if ($?) { gcc q1.c -o q1 } ; if ($?) { .\q1 }
Hello
PS D:\1. LABS\SE> splint q1.c
Splint 3.1.1 --- 12 April 2003

Finished checking --- no warnings
PS D:\1. LABS\SE>
```

Question 2: Write a C program having some global variables that are declared but not initialized. Return this uninitialized variable in the main function. Run Splint for this C code and report the error generated.

```c
#include<stdio.h>
int a,b;
int main(){
    printf("Hello");
    return a;
}
```

```
PS C:\c++> cd "d:\1. LABS\SE\" ; if ($?) { gcc q2.c -o q2 } ; if ($?) { .\q2 }
Hello
PS D:\1. LABS\SE> splint q2.c
Splint 3.1.1 --- 12 April 2003

q2.c(2,5): Variable exported but not used outside q2: a
  A declaration is exported, but not used outside this module. Declaration can
  use static qualifier. (Use -exportlocal to inhibit warning)

Finished checking --- 1 code warning
```

Question 3: Write a C program having some global variables that are declared but not initialized. Initialize some local variable using this uninitialized global variable. Run Splint for this C code and report the error generated. (For instance, assume global variable ‘a’ is declared as ‘int’ in the code. In the main function you can perform some operation such as ‘int b =a’. This code should generate some error as the variable ‘a’ is not initialized in the code.)

```c
#include<stdio.h>
int a,b;
int main(){
    int c=a;
    printf("Hello");
    return 0;
}
```

```
PS D:\1. LABS\SE> cd "d:\1. LABS\SE\" ; if ($?) { gcc q3.c -o q3 } ; if ($?) { .\q3 }
Hello
PS D:\1. LABS\SE> splint q3.c
Splint 3.1.1 --- 12 April 2003

q3.c: (in function main)
q3.c(4,9): Variable c declared but not used
  A variable is declared but never used. Use /*@unused@*/ in front of
  declaration to suppress message. (Use -varuse to inhibit warning)
q3.c(2,5): Variable exported but not used outside q3: a
  A declaration is exported, but not used outside this module. Declaration can
  use static qualifier. (Use -exportlocal to inhibit warning)

Finished checking --- 2 code warnings
PS D:\1. LABS\SE>
```

Question 4: Write a C program having structure as global variable. This structure can have more than two fields. Except one field, you can initialize values to all fields in the structure. Run Splint for this C code and report the error generated. (This code should generate error as you have one uninitialized field in structure)

```c
#include<stdio.h>
 struct variable{
    int a,b,c;
};
struct variable var1;
int main(){
    printf("Hello");
    var1.a = 1;
    var1.b = 2;
    return 0;
}
```

```
PS D:\1. LABS\SE> cd "d:\1. LABS\SE\2\" ; if ($?) { gcc q4.c -o q4 } ; if ($?) { .\q4 }
Hello
PS D:\1. LABS\SE\2> splint q4.c
Splint 3.1.1 --- 12 April 2003

q4.c(6,17): Variable exported but not used outside q4: var1
  A declaration is exported, but not used outside this module. Declaration can
  use static qualifier. (Use -exportlocal to inhibit warning)

Finished checking --- 1 code warning
PS D:\1. LABS\SE\2>
```