

## SOFTWARE ENGINEERING-2

NAMAN KHATER  
U19CS019

**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.

**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.

**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.)

**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)

Q1:

```
int x = 5;

int main()
{ int y =
7; return
0;
```

```

→ q-01 git:(master) x gcc -c main.c
→ q-01 git:(master) x splint main.c
Splint 3.1.2 --- 20 Feb 2018

main.c: (in function main)
main.c:4:7: Variable y 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)

Finished checking --- 1 code warning
→ q-01 git:(master) x |

```

Q2:

```

int x;

int main()
{ int y =
  7; return
  x;

```

```

→ q-02 git:(master) x gcc -c main.c
→ q-02 git:(master) x splint main.c
Splint 3.1.2 --- 20 Feb 2018

main.c: (in function main)
main.c:4:7: Variable y 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)
main.c:1:5: Variable exported but not used outside main: x
  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
→ q-02 git:(master) x |

```

Q3:

```
int x;

int main()
{ int y =
x; return
0;
}
```

```
→ q-03 git:(master) x gcc -c main.c
→ q-03 git:(master) x splint main.c
Splint 3.1.2 --- 20 Feb 2018

main.c: (in function main)
main.c:4:7: Variable y 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)
main.c:1:5: Variable exported but not used outside main: x
  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
→ q-03 git:(master) x |
```

Q4:

```
struct Student
{
    char*
    name;

    int age;

    double
    d;

};
```

```
struct Student s = {.age = 0, .d = 1.2};

int main() {
    return 0;
}
```

```
→ q-04 git:(master) x gcc -c main.c
→ q-04 git:(master) x splint main.c
Splint 3.1.2 --- 20 Feb 2018

main.c:7:20: Initializer block for s has 2 fields, but struct Student has 3
                fields: <error>, <error>
    Initializer does not set every field in the structure. (Use -fullinitblock to
    inhibit warning)

Finished checking --- 1 code warning
→ q-04 git:(master) x |
```