Computer Engineering Department, SVNIT, Surat.
B Tech-IV (CO) 7th semester
Course: SOFTWARE ENGINEERING (CS-I) (CO401)
Lab Assignment – 3

1. Implement the following problamatic control structures in C and compare the outputs of standard C compiler and the Splint tool.

   - Likely infite loops
   - Fall through switch cases
   - Missing switch cases
   - Empty statement after an if , while or for

2. What is buffer overflow? How it can be exploited? Write a C program to illustrate a buffer overflow attack?

3. Macro implementations or invocations can be dangerous. Justify this statement by giving an example in C language.

4. What do you mean by interface faults. Write a set of C programs to implement interface faults and perform their detection using Splint tool. Check whether they are detected by the standard C compiler or not.

Submission: A single (doc/pdf) file which will contain your answers, code and screenshots of generated outputs (if any). The name of the file will be assignment-number_yourid (e.g., A3_U17XXXX).