# UNIT TESTING REPORT

➢ We are using CUnit for testing user authentication and validity of loading details from user.txt

➢ We have made various header files along with .c and main file. At the end we are using MakeFile to compile and run the program.

## CUnit Testcases for checking an IP is in Blacklist:

- o **3 Sunny testcases** (Valid input files) and **3 rainy testcases** (Invalid input files)

```c
//sunny - valid input strings are passed to the checkvalidity function and checked if 1 is returned or not.
void test_SunnyCases(void) // Sunny Testcases
{
    char *str1 = "127.0.0.20";
    char *str2 = "127.34.213.1";
    char *str3 = "127.0.0.100";
    CU_ASSERT(check_BlackList(str1) == 0);
    CU_ASSERT(check_BlackList(str2) == 0);
    CU_ASSERT(check_BlackList(str3) == 0);
}
```

```c
//rainy - invalid input strings are passed to the checkvalidity function and checked if 0 is returned or not.
void test_RainyCases(void) // Rainy Testcases
{

    char *str4 = "12.204.255.255";
    char *str5 = "127.0.0.10";
    char *str6 = "127.0.0.1606";
    CU_ASSERT(check_BlackList(str4) == 1);
    CU_ASSERT(check_BlackList(str5) == 1);
    CU_ASSERT(check_BlackList(str6) == 1);
}
```

# CUnit Report for check_blacklist functionality:

```
      CUnit - A unit testing framework for C - Version 2.1-3
      http://cunit.sourceforge.net/


Suite: Testing_Suite1
  Test: Testing Sunny Cases ...


passed
  Test: Testing Rainy Cases ...


passed

Run Summary:    Type  Total     Ran Passed Failed Inactive
              suites      1       1    n/a      0        0
               tests      2       2      2      0        0
             asserts      6       6      6      0      n/a

Elapsed time =    0.000 seconds
```