

Software Testing Strategies

Example-1:

For the code below design 3 test suites using White box Testing:

```
1. #include <stdio.h>
2. int main(){
3.   int n1, n2, i, gcd;
4.   printf("Enter two integers: ");
5.   scanf("%d %d", &n1, &n2);
6.   for(i=1; i <= n1 && i <= n2; ++i){
7.     if(n1%i==0 && n2%i==0)
8.       gcd = i;
9.   }
10.  printf("G.C.D of %d and %d is %d", n1, n2, gcd);
11.  return 0;
12. }
```

Example-2:

Give 4 differences between functional testing and structural testing. For the code below design 3 test suites using White box testing:

```
1. #include <stdio.h>
2. int main() {
3.   int n1, n2, min;
4.   printf("Enter two positive integers: ");
5.   scanf("%d %d", &n1, &n2);
6.   if (n1>n2)
7.     min = n2;
8.   else min = n1;
9.   while (1) {
10.    if (min % n1 == 0 && min % n2 == 0) {
11.      printf("The LCM of %d and %d is %d.", n1, n2, min);
12.      break;
13.    }
14.    ++min;
15.  }
16.  return 0;
17. }
18. return 0;
19. }
```

Example 3: A software can compute the square root of an input integer which can assume values in the range of 0 to 5000. Design 3 Equivalence Class Partitioning test cases.

Example 4: Design the black-box test suite for the following program. The program computes the intersection point of two straight lines and displays the result. It reads two integer pairs (m1, c1) and (m2, c2) defining the two straight lines of the form $y=mx + c$.

Example 5: For the code below design 3 test suites using White box Testing:

```
int compute_gcd(x, y) {  
    int x, y;  
    while (x != y) {  
        if (x > y)  
            x = x - y;  
        else  
            y = y - x;  
        }  
    return x;  
}
```