

3. **Example:** Given the code below:

```
int main() {
    char grd;

    printf("Enter Letter Grade: ");
    scanf("%c",&grd);
    printf("You are ");

    switch (grd)      {
    case 'A' :
        printf("excellent\n");
        break;
    case 'B' :
        printf("good\n");
        break;
    case 'C' :
        printf("average\n");
        break;
    case 'D' :
        printf("poor\n");
        break;
    case 'F' :
        printf("failing\n");
        break;
    default :
        printf("incapable of reading directions\n");
        break;
    }
    return 0;
}
```

What does the program print if the user inputs:

- a. A
 - b. B+
 - c. c
 - d. X
4. How could we easily change each case to recognize both upper and lowercase inputs?

5. Explain the usage and basic structure of a `while` loop.

6. **Example:** What does each of the following short programs print?

a. `x = 7;`
`while (x < 10)`
`{`
 `printf("%d ", x);`
 `x = x + 1;`
`}`

b. `x = 7;`
`while (x < 3)`
`{`
 `printf("%d ", x);`
 `x = x + 1;`
`}`