

Week 2 Lab Tutorial: Basic C and Control Flow – Suggested Solutions

Lab Questions

Q1: (computeGrade)

```
#include <stdio.h>
int main()
{
    int studentNumber = 0, mark;

    printf("Enter Student ID: \n");
    scanf("%d", &studentNumber);
    while (studentNumber != -1)
    {
        printf("Enter Mark: \n");
        scanf("%d", &mark);
        switch ((mark+5) / 10) {
            case 10:
            case 9:
            case 8: printf("Grade = A\n");
                    break;
            case 7: printf("Grade = B\n");
                    break;
            case 6: printf("Grade = C\n");
                    break;
            case 5: printf("Grade = D\n");
                    break;
            default: printf("Grade = F\n");
        }
        printf("Enter Student ID: \n");
        scanf("%d", &studentNumber);
    }
    return 0;
}
```

Q2: (printAverage)

```
#include <stdio.h>
int main()
{
    int total, count, lines, input;
    double average;
    int i;

    printf("Enter number of lines: \n");
    scanf("%d", &lines);
    for (i = 0; i < lines; i++) {
        total=0; count=0;
        printf("Enter line %d (end with -1): \n", i+1);
        scanf("%d", &input);
        while (input != -1)
        {
            total += input;
            count++;
            scanf("%d", &input);
        }
        average = (double)total/(double)count;
        printf("Average = %.2f\n", average);
    }
    return 0;
}
```