Lab Report - 05

SE1012 – Programming methodology

Lab 05

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Q1.

0 — no parts skipped
1 — c >= 6 not evaluated

0 — a % 2 == 0 not evaluated
0 — c < a + b not evaluated

Q2.

1. (age >= 18 && age <= 21)
2. (water > 0.1 && water < 1.5)
3. (year % 4 == 0)
4. (speed <= 55)
5. (y > x && y < z)
6. (w == 6 || w <= 3)

Q3.

```c
#include <stdio.h>

int main() {
    // Input variables for authentication checks
    int fingerprint_match, retinal_match, access_card_valid;

    // Ask user to enter the values
    printf("Enter fingerprint match (1 for yes, 0 for no): ");
    scanf("%d", &fingerprint_match);

    printf("Enter retinal match (1 for yes, 0 for no): ");
    scanf("%d", &retinal_match);

    printf("Enter access card valid (1 for yes, 0 for no): ");
    scanf("%d", &access_card_valid);

    // Calculate how many checks passed
    int total_matches = fingerprint_match + retinal_match + access_card_valid;

    // Decision: Access granted if two or more checks are true
    if (total_matches >= 2) {
        printf("Access Granted\n");
    } else {
        printf("Access Denied\n");
    }

    return 0;
}
```

```
it23426108@MLBVDI-LNN-0003:$ gcc lab05.c -o lab05
it23426108@MLBVDI-LNN-0003:$ ./lab05
Enter fingerprint match (1 for yes, 0 for no): 1
Enter retinal match (1 for yes, 0 for no): 1
Enter access card valid (1 for yes, 0 for no): 0
Access Granted
```

Q4.

```c
#include <stdio.h>

int main() {
    // Declare variables for section scores
    int section1, section2, section3;

    // Input scores
    printf("Enter score for section 1: ");
    scanf("%d", &section1);

    printf("Enter score for section 2: ");
    scanf("%d", &section2);

    printf("Enter score for section 3: ");
    scanf("%d", &section3);

    // Calculate average score
    float average = (section1 + section2 + section3) / 3.0;

    // Check pass conditions
    if (section1 >= 70 && section2 >= 70 && section3 >= 70 && average >= 75) {
        printf("Pass\n");
    } else {
        printf("Fail\n");
    }

    return 0;
}
```

```
it23426108@MLBVDI-LNN-0003:$ gcc lab05.c -o lab05
it23426108@MLBVDI-LNN-0003:$ ./lab05
Enter score for section 1: 80
Enter score for section 2: 75
Enter score for section 3: 70
Pass
```