Lab04 – [IT23184558]

Exercise 01

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```c
// EXERCISE 01 [IT23184558 - BINUWARA D B Y]
#include <stdio.h>
int main() {
    float GPA;

    printf("Enter the GPA: ");
    scanf("%f",&GPA);

    // 0<=GPA<=4

    if (4<GPA || GPA<0)
        printf("INcorrect GPA, RE-enter\n");
    else if (GPA<=0.99)
        printf("Failed Semester-registration suspended\n");
    else if (GPA<=1.99 && GPA>=1.00)
        printf("On probation for the next semester\n");
    else if (GPA<=2.99 && GPA>=2.00)
        printf(" ");
    else if (GPA>=3.00 && GPA<=3.49)
        printf("Dean's list for semester\n");
    else
        printf("Highest Honors for semester\n");

    return 0;
}
```

Exercise 02

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```c
// EXERCISE 02 [IT23184558 - BINUWARA D B Y]
#include <stdio.h>
int main() {
    char ID;

    printf("Enter the first letter of the serial number: ");
    scanf("%c",&ID);

    switch (ID) {
            case 'B':
            case 'b':
            printf("class: Battleship\n");
            break;
            case 'C':
            case 'c':
            printf("class: Cruiser\n");
            break;
            case 'D':
            case 'd':
            printf("class: Destroyer\n");
            break;
            case 'F':
            case 'f':
            printf("class: Frigate\n");
            break;
            default:
            printf("Unknown Class\n");
            break;
    }
    return 0;
}
```

Exercise 03

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```c
// EXERCISE 03 [IT23184558 - BINUWARA D B Y]
#include <stdio.h>
int main() {
    int AGE;
    char sts;

    printf("Enter the age:");
    scanf("%d", &AGE);

    if (AGE>59) {
        printf("Enter status 'W' if working or any other key if not working:");
        scanf("&c",&sts);
        if (sts == 'W')
            printf("working senior");
        else
            printf("Retired Senior");
    }
    else if (AGE>20)
        printf("Adult");
    else if (AGE>12)
        printf("Teen");
    else
        printf("Child");

    return 0;
}
```

Exercise 04

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```c
// EXERCISE 04 [IT23184558 - BINUWARA D B Y]
#include <stdio.h>
int main() {
    float wt_lb, ht_in, BMI;

printf("Enter the weight in pounds: ");
scanf("%f", &wt_lb);

printf("Enter the height in inches: ");
scanf("%f", &ht_in);

BMI = (703 * wt_lb) / (ht_in^2);

printf("Your BMI is: %f \n", BMI);

 if (BMI < 18.5)
    printf("Underweight");
 else if (BMI > 18.5 && BMI < 24.9)
     printf("Normal");
 else if (BMI > 25.0 && BMI < 29.9)
    printf("Overweight");
 else
    printf("Obese");

return 0;
}
```

Exercise 05

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```c
// EXERCISE 05 [IT23184558 - BINUWARA D B Y]
#include <stdio.h>
int main(){
    float n;
    int type;

    printf("Enter Richter Scale Value: ");
    scanf("%f", &n);

    if (n > 0 && n < 5.0)
        type = 1;
    else if (n >= 5.0 && n < 5.5)
        type = 2;
    else if (n >= 5.5 && n < 6.5)
        type = 3;
    else if (n >= 6.5 && n < 7.5)
        type = 4;
    else if (n > 7.5)
        type = 5;
    else
        type = 6;

switch(type) {
    case 1:
        printf("Little or no damage");
    break;
    case 2:
        printf("Some damage");
    break;
    case 3:
        printf("Serious damage: walls may crack or fall");
    break;
    case 4:
        printf("Disaster: houses and buildings may collapse");
    break;
    case 5:
        printf("Catastrophe: most buildings destroyed");
    break;
    default:
        printf("Incorrect value");
}

return 0;
}

```

Exercise 06

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```c
// EXERCISE 06 [IT23184558 - BINUWARA D B Y]
#include <stdio.h>
int main() {
    int weekday, night, weekend;
    float totalBill, preTaxBill, averageCost, taxes;
    float flatRate = 39.99;
    float taxRate = 5.25;
    float addCost = 0.40;

printf("Enter weekday minutes: ");
scanf("%d", &weekday);
printf("Enter night minutes: ");
scanf("%d", &night);
printf("Enter weekend minutes: ");
scanf("%d", &weekend);

//Usage Display
printf("\n");
printf("MONTHLY USAGE\n");
printf("Weekday Minutes: %d \n", weekday);
printf("Night Minutes: %d \n", night);
printf("Weekend Minutes: %d \n", weekend);
printf("\n");

//Bill Calculation
if (weekday <= 600)
 preTaxBill = 39.99 * weekday;
else
 preTaxBill = (39.99 * 600) + ((weekday - 600) * addCost);
 averageCost = preTaxBill / weekday;
 taxes = preTaxBill * (5.25 / 100);
 totalBill = preTaxBill + taxes;

//Bill Display
printf("MONTHLY BILL\n");
printf("Pre-Tax Bill: %.2f \n", preTaxBill);
printf("Average Minute Cost: %.2f \n", averageCost);
printf("Taxes: %.2f \n", taxes);
printf("Total Bill: %.2f", totalBill);

return 0;
}
```