Exercise 01

```
#include <stdio.h>

int main(){

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

if (gpa >= 0.0 && gpa <= 0.99)
printf("Failed Semester – Registration Suspended\n");

else if (gpa >= 1.0 && gpa <= 1.99)
printf("On probation for next semester\n");

else if(gpa >= 2.0 && gpa <= 2.99)
printf("\n");

else if(gpa >= 3.0 && gpa <= 3.49)
printf("Dean's list for semester\n");

else if(gpa >= 3.5 && gpa <= 4.00)
printf("Highest honours for semester\n");

else
printf("Invalid GPA\n");

return 0;
}
```

Exercise 02

```
#include <stdio.h>

int main(){

char class;

printf("Enter the serial number of the ship: ");
scanf("%c", &class);

printf("Ship Class: %c\n", class);

switch(class){

case 'B':
case 'b':
        printf("Class B: Battleship");
        break;

case 'C':
case 'c':
        printf("Class C: Cruiser");
        break;

case 'D':
case 'd':
        printf("Class D: Destroyer");
        break;

case 'F':
case 'f':
        printf("Class F: Frigate");
        break;

default:
        printf("Invalid serial number");
}

return 0;
}
```

Exercise 03

```
#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\n", &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

```
#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 * ht_in);

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

```
#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

```
#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;
}
```