

PART I : Ahmet Muzaffer Dülger'in Ödev Çözümünden Alınmıştır.

```
#include <stdio.h>
#include <stdlib.h>
#include <time.h>

int RNG();
int CalculateTheDifference();
int WarnThePlayer(int difference);

int main(void)
{
    printf("\n\n#####__WELCOME TO 'GUESSING AN INTEGER NUMBER'
GAME__#####\n\n");

    /*Prints the result to the screen.*/
    CalculateTheDifference();
}

/*To generate the random number*/
int RNG()
{
    int x=0;
    srand(time(NULL));
    x = rand()%10;
    return x;
}

/*To calculate the difference between guess and the number*/
int CalculateTheDifference()
{
    int x = RNG();
    int equal=1;
    int user_guess, temp,y;
    int i = 0;

    while(i<2 && equal !=0)
    {
        printf("Please enter your guess: ");
        scanf("%d", &user_guess);

        if (user_guess>x)
        {
            y=x;
            temp=user_guess;
            user_guess=y;
            y=temp;
            equal = y - user_guess;
        }
        else
```

```

    {
        equal = x - user_guess;
    }

    WarnThePlayer(equal);
    i++;

    if (i==2 && equal != 0)
        printf("GAME OVER!!!\n\n");
    }
}

```

/\*To print a warning in order to guide the player.\*/

```

int WarnThePlayer(int difference)
{
    if (difference == 0)
    {
        printf("Congratulations\n\n");
    }
    else if (difference >= 5)
    {
        printf("You are too far from the number\n\n");
    }
    else if (difference >= 3 && difference < 5)
    {
        printf("You are far from the number\n\n");
    }
    else if (difference == 1 || difference == 2)
    {
        printf("You are close to the number\n\n");
    }
}

```

PART II : Oğuzhan TOHUMCU'nun Ödev Çözümünden Alınmıştır.

```

/*Written by Oguzhan Tohumcu on March 01, 2015 */
/* */
/*Description */
/*_____ */
/*Calculates letter grade of 5 students */
/*Inputs: */
/* -5 initials and 3 integers(midterm1, midterm2, final) */
/*Outputs: */
/* -Resulting grades (in text file) and contributions (to the screen) */
/*#####*/
/* */
/*-----*/
/* Includes */

```

```

/*-----*/

#include<stdio.h>

/*-----*/
/*          #defines          */
/*-----*/
#define MIDS_WEIGHT      30.0/100
#define FIN_WEIGHT       40.0/100

/*-----*/
/*          Function Prototypes          */
/*-----*/

/*#####*/
/*          */
/* double calcGrade(int mid1_pt, int mid2_pt, int fin_pt)          */
/* -----          */
/*  mid1_pt - midterm1 point of the student          */
/*  mid2_pt - midterm2 point of the student          */
/*  fin_pt  - final point of the student          */
/* Return          */
/* -----          */
/*  Resulting grade          */
/*          */
/* Description          */
/* -----          */
/*  This function calculates the resulting grade of the students.          */
/*          */
/*#####*/
double calcGrade(int mid1_pt, int mid2_pt, int fin_pt);

/*#####*/
/*          */
/* char checkGrade(int pt)          */
/* -----          */
/*  pt - average point of the student          */
/* Return          */
/* -----          */
/*  No          */
/*          */
/* Description          */
/* -----          */
/*  This function calculates letter grade corresponding to the student's          */
/*  points.          */
/*          */
/*#####*/
char checkGrade(int pt);

```

```

/*#####*/
/*                                */
/* void printContr(char grade)    */
/* -----                      */
/* grade - letter grade of the student */
/* Return                        */
/* -----                      */
/* Letter grade                  */
/*                                */
/* Description                    */
/* -----                      */
/* This function calculates the contribution of the resulting grade to */
/* the GPA and print it to the screen. */
/*                                */
/*#####*/
void printContr(char grade);

```

```

int main()
{
    FILE *inp,           /*Pointer to input and output files*/
        *outp;

    /*name and surname initials of students*/
    char name1, surname1,
        name2, surname2,
        name3, surname3,
        name4, surname4,
        name5, surname5;
    /*to keep midterms and final points*/
    int mid1_pt1, mid2_pt1, fin_pt1,
        mid1_pt2, mid2_pt2, fin_pt2,
        mid1_pt3, mid2_pt3, fin_pt3,
        mid1_pt4, mid2_pt4, fin_pt4,
        mid1_pt5, mid2_pt5, fin_pt5;
    /*to keep points*/
    double pt1, pt2, pt3, pt4, pt5;
    /*to keep letter grades*/
    char grade1, grade2, grade3, grade4, grade5;

    /*Open the input and output files*/
    inp = fopen("Students.txt", "r");
    outp = fopen("Grades.txt", "w");

    /*Get values input text file*/
    fscanf(inp, "%c%c %d %d %d ", &name1, &surname1, &mid1_pt1, &mid2_pt1,
        &fin_pt1);
    fscanf(inp, "%c%c %d %d %d ", &name2, &surname2, &mid1_pt2, &mid2_pt2,
        &fin_pt2);
    fscanf(inp, "%c%c %d %d %d ", &name3, &surname3, &mid1_pt3, &mid2_pt3,

```

```

                                &fin_pt3);
fscanf(inp, "%c%c %d %d %d ", &name4, &surname4, &mid1_pt4, &mid2_pt4,
                                &fin_pt4);
fscanf(inp, "%c%c %d %d %d", &name5, &surname5, &mid1_pt5, &mid2_pt5,
                                &fin_pt5);

```

```

/*Calculates points with function call*/

```

```

pt1 = calcGrade(mid1_pt1, mid2_pt1, fin_pt1);
pt2 = calcGrade(mid1_pt2, mid2_pt2, fin_pt2);
pt3 = calcGrade(mid1_pt3, mid2_pt3, fin_pt3);
pt4 = calcGrade(mid1_pt4, mid2_pt4, fin_pt4);
pt5 = calcGrade(mid1_pt5, mid2_pt5, fin_pt5);

```

```

/*Calculates grades with function call*/

```

```

grade1 = checkGrade(pt1);
grade2 = checkGrade(pt2);
grade3 = checkGrade(pt3);
grade4 = checkGrade(pt4);
grade5 = checkGrade(pt5);

```

```

/*Resulting points displayed to output file*/

```

```

fprintf(outp, "%c%c %.0f\n", name1, surname1, pt1);
fprintf(outp, "%c%c %.0f\n", name2, surname2, pt2);
fprintf(outp, "%c%c %.0f\n", name3, surname3, pt3);
fprintf(outp, "%c%c %.0f\n", name4, surname4, pt4);
fprintf(outp, "%c%c %.0f\n", name5, surname5, pt5);

```

```

/*Output the resulting contributions to the screen*/

```

```

printContr(grade1);
printContr(grade2);
printContr(grade3);
printContr(grade4);
printContr(grade5);
printf("\n\n");

```

```

/*Close files*/

```

```

fclose(inp);
fclose(outp);

```

```

return 0;

```

```

}

```

```

/*-----*/
/*           Function Implementation           */
/*-----*/

```

```

/* Function calcGrade */
/* ----- */
/* This function calculates the resulting grade of the students. */

```

```

double calcGrade(int mid1_pt, int mid2_pt, int fin_pt)
{
    return (mid1_pt * MIDS_WEIGHT + mid2_pt * MIDS_WEIGHT +
            fin_pt * FIN_WEIGHT);
}

/* Function checkGrade */
/* ----- */
/* This function calculates letter grade corresponding to the student's */
/* points. */

char checkGrade(int pt)
{
    char grade;

    if(pt>=85 && pt<=100)
        grade = 'A';
    else if(pt>=70 && pt<=84)
        grade = 'B';
    else if(pt>=65 && pt<=69)
        grade = 'C';
    else if(pt>=40 && pt<=64)
        grade = 'D';
    else if(pt<=39)
        grade = 'F';

    return grade;
}

/* Function checkGrade */
/* ----- */
/* This function calculates the contribution of the resulting grade to */
/* the GPA and print it to the screen. */

void printContr(char grade)
{
    double contr;

    printf("\n");
    switch(grade) {
        case 'A':
            contr = 4*3/20.0;
            printf("The contribution is %.2f.", contr);
            break;

        case 'B':
            contr = 3*3/20.0;
            printf("The contribution is %.2f.", contr);
            break;
    }
}

```

```
case 'C':  
    contr = 2*3/20.0;  
    printf("The contribution is %.2f.", contr);  
    break;  
case 'D':  
    contr = 1*3/20.0;  
    printf("The contribution is %.2f.", contr);  
    break;  
case 'F':  
    contr = 0*3/20.0;  
    printf("The contribution is %.2f.", contr);  
    break;  
default:  
    printf("You entered wrong character!! Try again..\n");  
}  
}
```