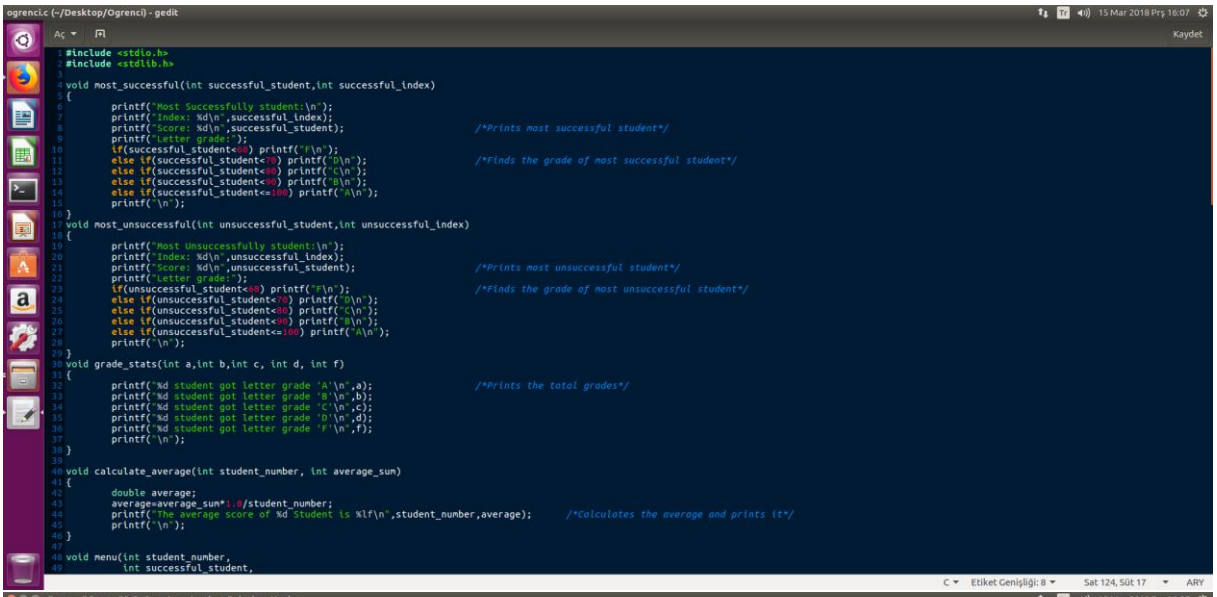
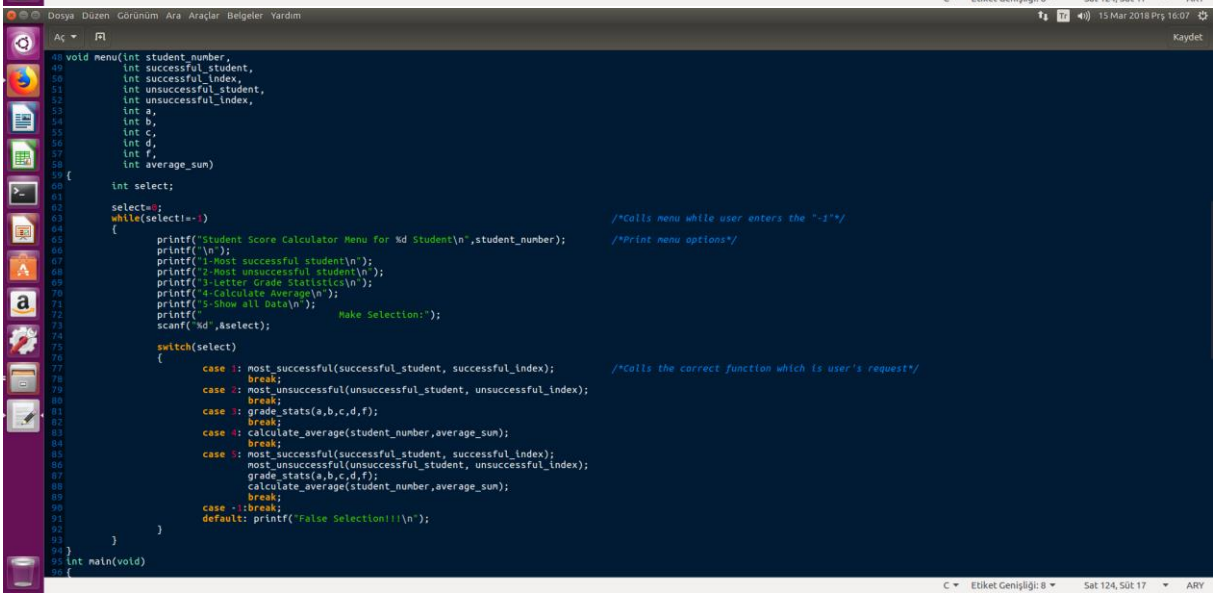
PART 1:

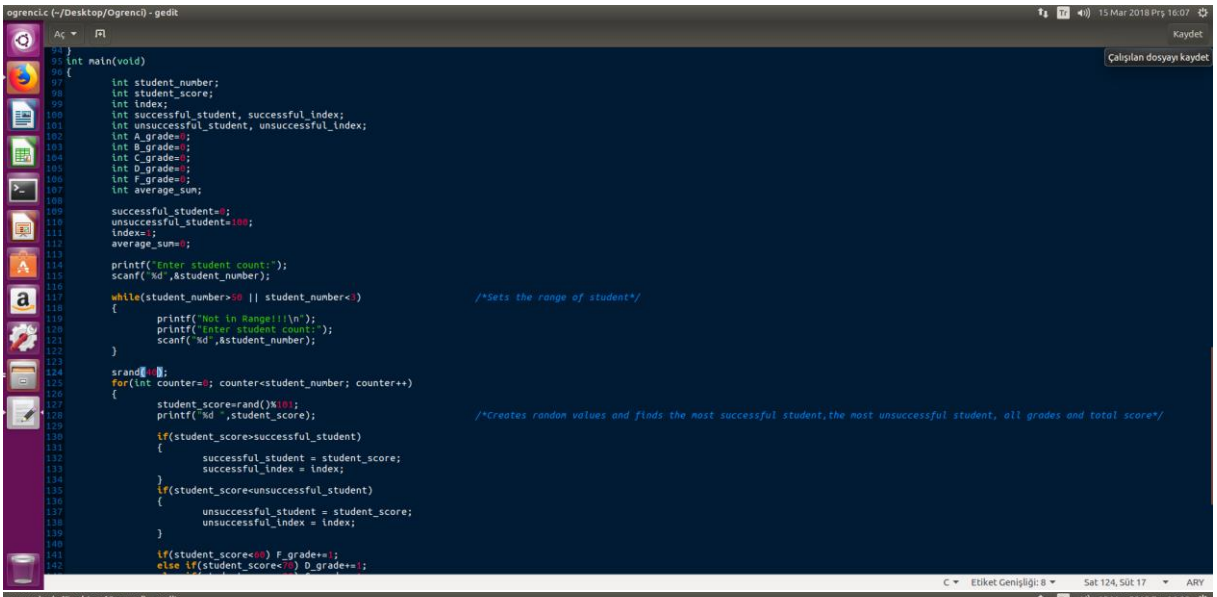
Codes:

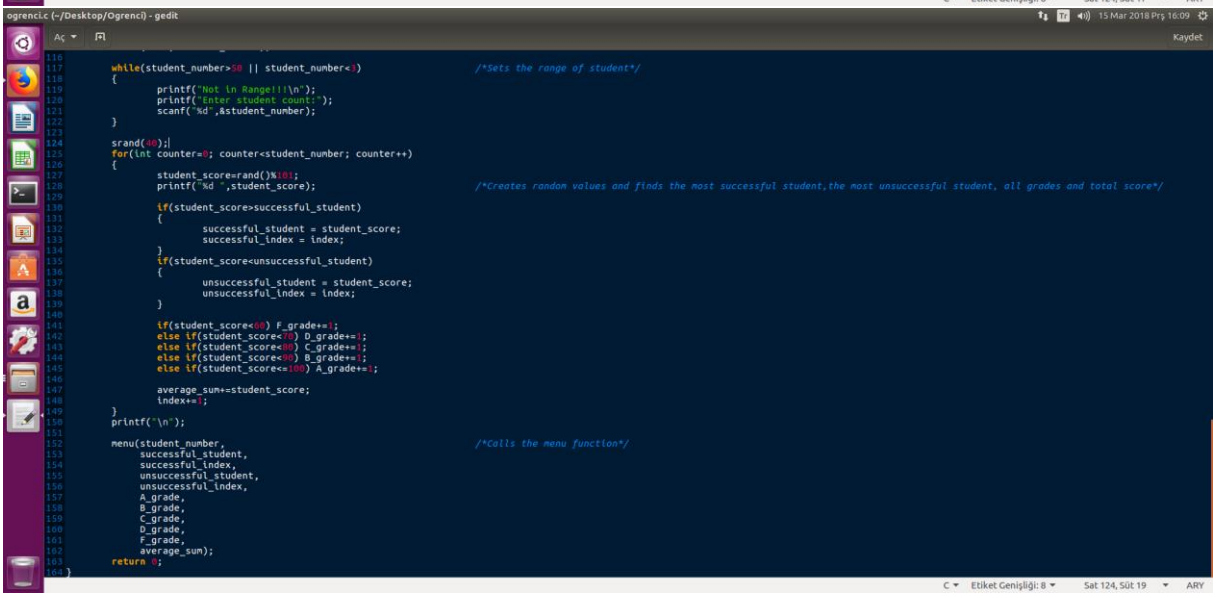


```c
#include <stdio.h>
#include <stdlib.h>

void most_successful(int successful_student,int successful_index)
{
        printf("Most Successfully student:\n");
        printf("Index: %d\n",successful_index);
        printf("Score: %d\n",successful_student);                       /*Prints most successful student*/
        printf("Letter grade:");
        if(successful_student<60) printf("F\n");
        else if(successful_student<70) printf("D\n");                  /*Finds the grade of most successful student*/
        else if(successful_student<80) printf("C\n");
        else if(successful_student<90) printf("B\n");
        else if(successful_student<=100) printf("A\n");
        printf("\n");
}
void most_unsuccessful(int unsuccessful_student,int unsuccessful_index)
{
        printf("Most Unsuccessfully student:\n");
        printf("Index: %d\n",unsuccessful_index);
        printf("Score: %d\n",unsuccessful_student);                     /*Prints most unsuccessful student*/
        printf("Letter grade:");
        if(unsuccessful_student<60) printf("F\n");                     /*Finds the grade of most unsuccessful student*/
        else if(unsuccessful_student<70) printf("D\n");
        else if(unsuccessful_student<80) printf("C\n");
        else if(unsuccessful_student<90) printf("B\n");
        else if(unsuccessful_student<=100) printf("A\n");
        printf("\n");
}
void grade_stats(int a,int b,int c, int d, int f)
{
        printf("%d student got letter grade 'A'\n",a);                  /*Prints the total grades*/
        printf("%d student got letter grade 'B'\n",b);
        printf("%d student got letter grade 'C'\n",c);
        printf("%d student got letter grade 'D'\n",d);
        printf("%d student got letter grade 'F'\n",f);
        printf("\n");
}

void calculate_average(int student_number, int average_sum)
{
        double average;
        average=average_sum*1.0/student_number;
        printf("The average score of %d Student is %lf\n",student_number,average);      /*Calculates the average and prints it*/
        printf("\n");
}

void menu(int student_number,
          int successful_student,
```

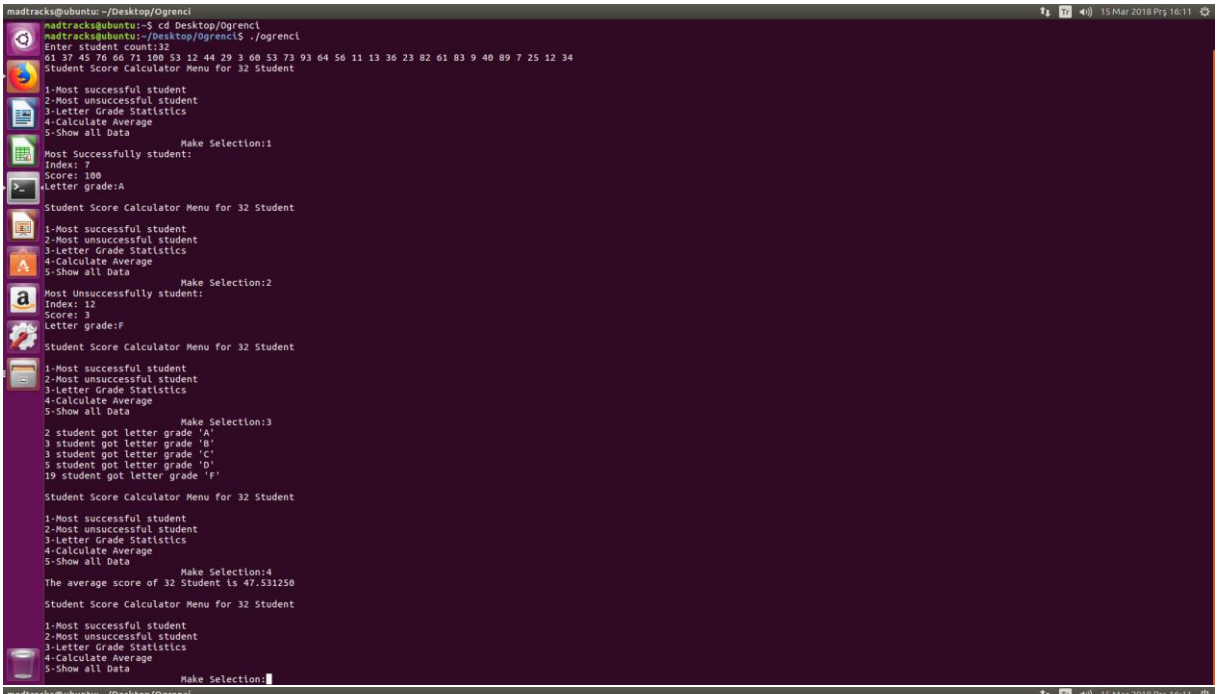


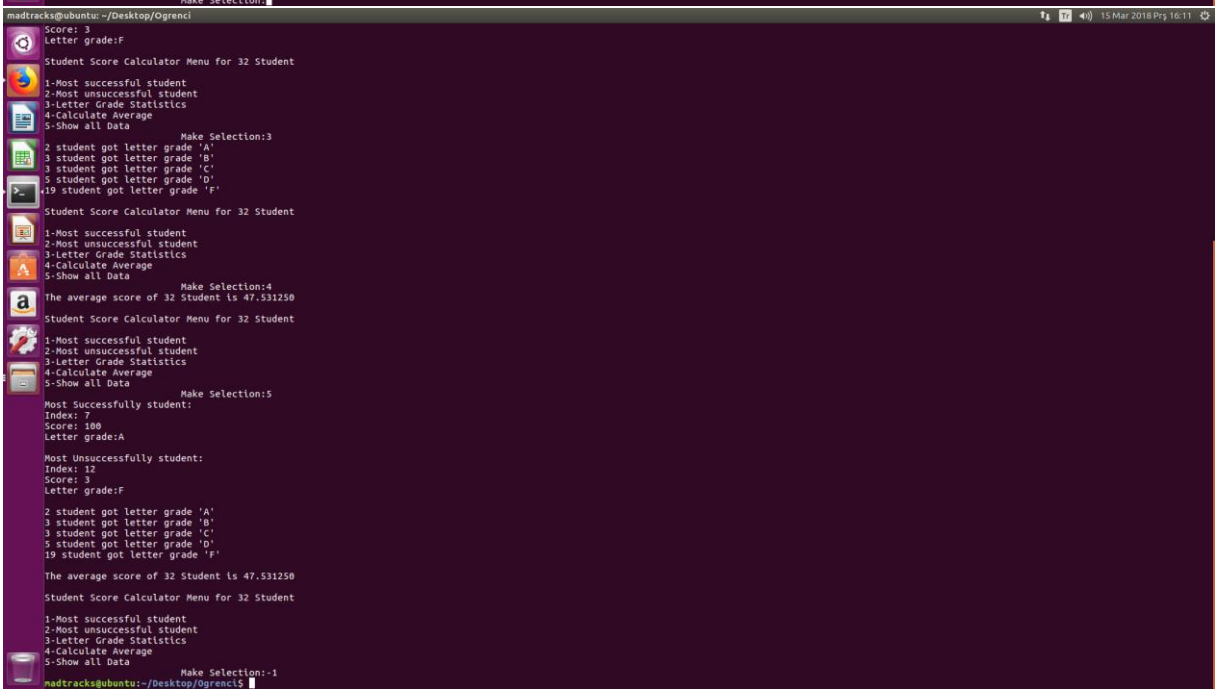
```c
void menu(int student_number,
          int successful_student,
          int successful_index,
          int unsuccessful_student,
          int unsuccessful_index,
          int a,
          int b,
          int c,
          int d,
          int f,
          int average_sum)
{
        int select;

        select=0;
        while(select!=-1)                                               /*Calls menu while user enters the "-1"*/
        {
                printf("Student Score Calculator Menu for %d Student\n",student_number);        /*Print menu options*/
                printf("\n");
                printf("1-Most successful student\n");
                printf("2-Most unsuccessful student\n");
                printf("3-Letter Grade Statistics\n");
                printf("4-Calculate Average\n");
                printf("5-Show all Data\n");
                printf("                        Make Selection:");
                scanf("%d",&select);

                switch(select)
                {
                        case 1: most_successful(successful_student, successful_index);          /*Calls the correct function which is user's request*/
                                break;
                        case 2: most_unsuccessful(unsuccessful_student, unsuccessful_index);
                                break;
                        case 3: grade_stats(a,b,c,d,f);
                                break;
                        case 4: calculate_average(student_number,average_sum);
                                break;
                        case 5: most_successful(successful_student, successful_index);
                                most_unsuccessful(unsuccessful_student, unsuccessful_index);
                                grade_stats(a,b,c,d,f);
                                calculate_average(student_number,average_sum);
                                break;
                        case -1:break;
                        default: printf("False Selection!!!\n");
                }
        }
}
int main(void)
{
```


ogrenci.c (~/Desktop/Ogrenci) - gedit
15 Mar 2018 Prş 16:07
Aç
Kaydet
Çalışılan dosyayı kaydet
}
int main(void)
{
int student_number;
int student_score;
int index;
int successful_student, successful_index;
int unsuccessful_student, unsuccessful_index;
int A_grade=0;
int B_grade=0;
int C_grade=0;
int D_grade=0;
int F_grade=0;
int average_sum;
successful_student=0;
unsuccessful_student=100;
index=-;
average_sum=0;
printf("Enter student count:");
scanf("%d",&student_number);
while(student_number>50 || student_number<0) /*Sets the range of student*/
{
printf("Not in Range!!!\n");
printf("Enter student count:");
scanf("%d",&student_number);
}
srand(40);
for(int counter=0; counter<student_number; counter++)
{
student_score=rand()%101;
printf("%d ",student_score); /*Creates random values and finds the most successful student,the most unsuccessful student, all grades and total score*/
if(student_score>successful_student)
{
successful_student = student_score;
successful_index = index;
}
if(student_score<unsuccessful_student)
{
unsuccessful_student = student_score;
unsuccessful_index = index;
}
if(student_score<60) F_grade++1;
else if(student_score<70) D_grade++1;
C
Etiket Genişliği: 8
Sat 124, Süt 17
ARY


ogrenci.c (~/Desktop/Ogrenci) - gedit
15 Mar 2018 Prş 16:09
Aç
Kaydet
while(student_number>50 || student_number<0) /*Sets the range of student*/
{
printf("Not in Range!!!\n");
printf("Enter student count:");
scanf("%d",&student_number);
}
srand(40);
for(int counter=0; counter<student_number; counter++)
{
student_score=rand()%101;
printf("%d ",student_score); /*Creates random values and finds the most successful student,the most unsuccessful student, all grades and total score*/
if(student_score>successful_student)
{
successful_student = student_score;
successful_index = index;
}
if(student_score<unsuccessful_student)
{
unsuccessful_student = student_score;
unsuccessful_index = index;
}
if(student_score<60) F_grade++1;
else if(student_score<70) D_grade++1;
else if(student_score<80) C_grade++1;
else if(student_score<90) B_grade++1;
else if(student_score<=100) A_grade++1;
average_sum+=student_score;
index+=1;
}
printf("\n");
menu(student_number, /*Calls the menu function*/
successful_student,
successful_index,
unsuccessful_student,
unsuccessful_index,
A_grade,
B_grade,
C_grade,
D_grade,
F_grade,
average_sum);
return 0;
}
C
Etiket Genişliği: 8
Sat 124, Süt 19
ARY

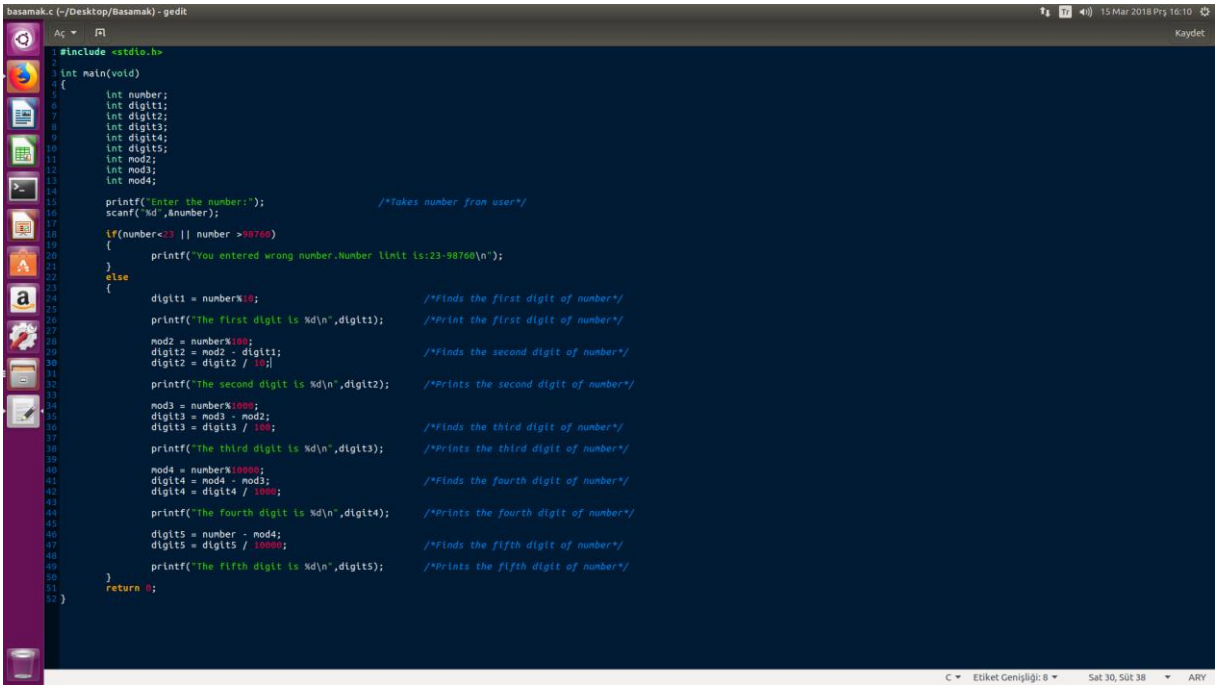
Outputs:


madtracks@ubuntu: ~/Desktop/Ogrenci
15 Mar 2018 Prş 16:11
madtracks@ubuntu:~$ cd Desktop/Ogrenci
madtracks@ubuntu:~/Desktop/Ogrenci$ ./ogrenci
Enter student count:32
61 37 45 76 66 71 100 53 12 44 29 3 60 53 73 93 64 56 11 13 36 23 82 61 83 9 40 89 7 25 12 34
Student Score Calculator Menu for 32 Student
1-Most successful student
2-Most unsuccessful student
3-Letter Grade Statistics
4-Calculate Average
5-Show all Data
Make Selection:1
Most Successfully student:
Index: 7
Score: 100
Letter grade:A
Student Score Calculator Menu for 32 Student
1-Most successful student
2-Most unsuccessful student
3-Letter Grade Statistics
4-Calculate Average
5-Show all Data
Make Selection:2
Most Unsuccessfully student:
Index: 12
Score: 3
Letter grade:F
Student Score Calculator Menu for 32 Student
1-Most successful student
2-Most unsuccessful student
3-Letter Grade Statistics
4-Calculate Average
5-Show all Data
Make Selection:3
2 student got letter grade 'A'
3 student got letter grade 'B'
3 student got letter grade 'C'
5 student got letter grade 'D'
19 student got letter grade 'F'
Student Score Calculator Menu for 32 Student
1-Most successful student
2-Most unsuccessful student
3-Letter Grade Statistics
4-Calculate Average
5-Show all Data
Make Selection:4
The average score of 32 Student is 47.531250
Student Score Calculator Menu for 32 Student
1-Most successful student
2-Most unsuccessful student
3-Letter Grade Statistics
4-Calculate Average
5-Show all Data
Make Selection:


madtracks@ubuntu: ~/Desktop/Ogrenci
15 Mar 2018 Prş 16:11
Score: 3
Letter grade:F
Student Score Calculator Menu for 32 Student
1-Most successful student
2-Most unsuccessful student
3-Letter Grade Statistics
4-Calculate Average
5-Show all Data
Make Selection:3
2 student got letter grade 'A'
3 student got letter grade 'B'
3 student got letter grade 'C'
5 student got letter grade 'D'
19 student got letter grade 'F'
Student Score Calculator Menu for 32 Student
1-Most successful student
2-Most unsuccessful student
3-Letter Grade Statistics
4-Calculate Average
5-Show all Data
Make Selection:4
The average score of 32 Student is 47.531250
Student Score Calculator Menu for 32 Student
1-Most successful student
2-Most unsuccessful student
3-Letter Grade Statistics
4-Calculate Average
5-Show all Data
Make Selection:5
Most Successfully student:
Index: 7
Score: 100
Letter grade:A
Most Unsuccessfully student:
Index: 12
Score: 3
Letter grade:F
2 student got letter grade 'A'
3 student got letter grade 'B'
3 student got letter grade 'C'
5 student got letter grade 'D'
19 student got letter grade 'F'
The average score of 32 Student is 47.531250
Student Score Calculator Menu for 32 Student
1-Most successful student
2-Most unsuccessful student
3-Letter Grade Statistics
4-Calculate Average
5-Show all Data
Make Selection:-1
madtracks@ubuntu:~/Desktop/Ogrenci$

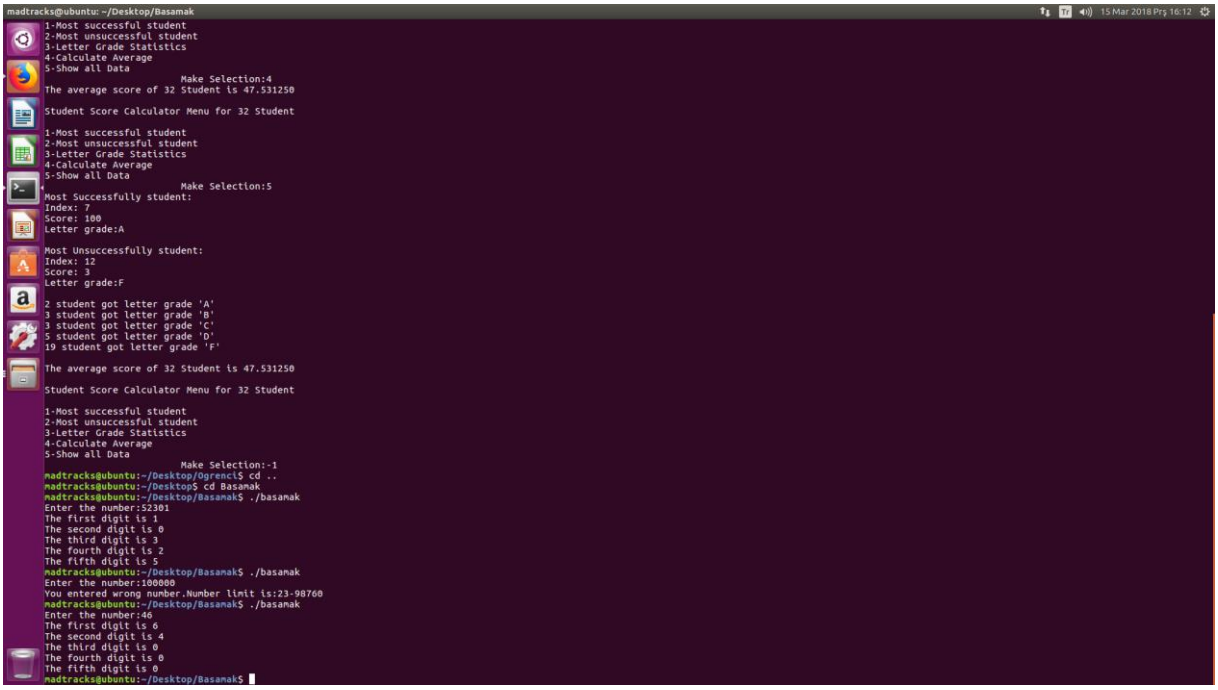
PART2:

Codes:



```c
#include <stdio.h>

int main(void)
{
        int number;
        int digit1;
        int digit2;
        int digit3;
        int digit4;
        int digit5;
        int mod2;
        int mod3;
        int mod4;

        printf("Enter the number:");                    /*Takes number from user*/
        scanf("%d",&number);

        if(number<23 || number >98760)
        {
                printf("You entered wrong number.Number limit is:23-98760\n");
        }
        else
        {
                digit1 = number%10;                             /*Finds the first digit of number*/

                printf("The first digit is %d\n",digit1);       /*Print the first digit of number*/

                mod2 = number%100;
                digit2 = mod2 - digit1;                         /*Finds the second digit of number*/
                digit2 = digit2 / 10;

                printf("The second digit is %d\n",digit2);      /*Prints the second digit of number*/

                mod3 = number%1000;
                digit3 = mod3 - mod2;
                digit3 = digit3 / 100;                          /*Finds the third digit of number*/

                printf("The third digit is %d\n",digit3);       /*Prints the third digit of number*/

                mod4 = number%10000;
                digit4 = mod4 - mod3;                           /*Finds the fourth digit of number*/
                digit4 = digit4 / 1000;

                printf("The fourth digit is %d\n",digit4);      /*Prints the fourth digit of number*/

                digit5 = number - mod4;
                digit5 = digit5 / 10000;                        /*Finds the fifth digit of number*/

                printf("The fifth digit is %d\n",digit5);       /*Prints the fifth digit of number*/
        }
        return 0;
}
```

Outputs:



```
1-Most successful student
2-Most unsuccessful student
3-Letter Grade Statistics
4-Calculate Average
5-Show all Data
                        Make Selection:4
The average score of 32 Student is 47.531250

Student Score Calculator Menu for 32 Student

1-Most successful student
2-Most unsuccessful student
3-Letter Grade Statistics
4-Calculate Average
5-Show all Data
                        Make Selection:5
Most Successfully student:
Index: 7
Score: 100
Letter grade:A

Most Unsuccessfully student:
Index: 12
Score: 3
Letter grade:F

2 student got letter grade 'A'
3 student got letter grade 'B'
3 student got letter grade 'C'
5 student got letter grade 'D'
19 student got letter grade 'F'

The average score of 32 Student is 47.531250

Student Score Calculator Menu for 32 Student

1-Most successful student
2-Most unsuccessful student
3-Letter Grade Statistics
4-Calculate Average
5-Show all Data
                        Make Selection:-1
madtracks@ubuntu:~/Desktop/Ogrenci$ cd ..
madtracks@ubuntu:~/Desktop$ cd Basamak
madtracks@ubuntu:~/Desktop/Basamak$ ./basamak
Enter the number:52301
The first digit is 1
The second digit is 0
The third digit is 3
The fourth digit is 2
The fifth digit is 5
madtracks@ubuntu:~/Desktop/Basamak$ ./basamak
Enter the number:100000
You entered wrong number.Number limit is:23-98760
madtracks@ubuntu:~/Desktop/Basamak$ ./basamak
Enter the number:46
The first digit is 6
The second digit is 4
The third digit is 0
The fourth digit is 0
The fifth digit is 0
madtracks@ubuntu:~/Desktop/Basamak$
```