1. A Python analysis program is required for with GUI interface with Arabic and English interfaces.
2. Explanation of the program's work after completing it in English.

•The data is only one excel file in this format (the columns in yellow are the ones we will use)

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Student ID	Date of birth	Place of birth	Type of ID	Place of issue	Department	Major	Graduation Year	Year	Semester for graduation	GPA	Grade	Type of certificate
2	101298422	1411/01/01	الرياض	إقامة	الرياض	تقنية الحاسب	الدعم الفني	1433	1433/1432	4323	4.11	جيد جدا	دبلوم
3	438139281		الرياض	إقامة	مكة المكرمة	التقنية الكهربائية	القوى الكهربائية	1440	1440-1441	4401	4.86	ممتاز	دبلوم
4													

- **Initially, we will have to add new variables as follows:**

1. Age= year of graduation – date of birth

2. year of start:

It is the block 4 and 5 of the student ID whose number begins with 101, for example 101304067 This student started studying on the date of 1430 AH. Student ID who begins with number 4, for example 438210342, this student started to study in 1438 AH, meaning block 2 and 3.

3. Year in college= (year of graduation – year of start)

- **Add icon for the function : import new excel file**

Reports required are Graph + tables:

The first report:

- **number of year in college**

The number of years the student spent in college. The default period is two years, but there are students who do not graduate within two years, so it is more than two years because of their stumbling in the modules. Through this report, shows how many years the student spent during his studies for each major.

The user chooses the graduation year or a period of years (from xxxx to xxxx)

The report produces a graph + table

5 years or more	4 years	3 years	2 years	major
10	20	500	2000	Mechanical production
6	3	30	2500	Chemical production
0	3	10	1000	Electrical machines and equipment
				.....etc

Second report:

• distribution of min, mean, max year of graduation for major, department, college

1. The report produces graphs + tables

the user chooses the majors and a period of years (from xxxx to xxxx)

max	mean	min	major
20	50	200	Mechanical production
3	30	250	Chemical production
3	10	100	Electrical machines and equipment
			….. etc

2. The report produces graphs + tables

the user chooses the departments and a period of years (from xxxx to xxxx)

max	mean	min	departments
20	50	200	Mechanics Department
3	30	250	chemistry department
3	10	100	electricity department
			….. etc

3. The report produces graphs + tables

the user chooses a period of years (from xxxx to xxxx), because there is only one college

max	mean	min	college
20	50	200	Technical college

Third report:

:

- distribution of min, mean, max age of graduation for major, department, college

Graduates age for each major.

1. The report produces graphs + tables

the user chooses the majors and a period of years (from xxxx to xxxx)

max	mean	min	majors
30	23	21	Mechanical production
31	23	22	Chemical production
31	24	22	Electrical machines and equipment
			….. etc

2. The report produces graphs + tables
the user chooses the departments and a period of years (from xxxx to xxxx)

max	mean	min	departments
30	23	21	Mechanics Department
31	23	22	chemistry department
31	24	22	electricity department
			….. etc

3. The report produces graphs + tables
the user chooses a period of years (from xxxx to xxxx), because there is only one college

max	mean	min	college
30	23	21	Technical college

Forth report:

- distribution of min, mean, max GPA of graduation for major, department, college.

1. The report produces graphs + tables
the user chooses the majors and a period of years (from xxxx to xxxx)

max	mean	min	majors
5	4.1	2	Mechanical production
5	4.5	2.6	Chemical production
5	4	2.6	Electrical machines and equipment
			….. etc

2. The report produces graphs + tables
the user chooses the departments and a period of years (from xxxx to xxxx)

max	mean	min	departments
5	4.1	2	Mechanics Department
5	4.5	2.6	chemistry department
5	4.1	2	electricity department
			….. etc

3. The report produces graphs + tables
the user chooses a period of years (from xxxx to xxxx), because there is only one college.

max	mean	min	college
5	4.1	2	Technical college

Fifth report:

- geographic distribution of students

The report produces graphs + tables
the user chooses a period of years (from xxxx to xxxx),

Student number	Region
200	Riyadh Region
250	Makkah Region
100	East Region
	atc ‘‘‘

Sixth report:

1. native/non-native

The report produces graphs + tables
the user chooses a period of years (from xxxx to xxxx),

Student number	native/non-native
200	native
250	non-native

2. The report produces a comparison of GPA in graphs + tables

the user chooses a period of years (from xxxx to xxxx),

max	mean	min	native/non-native
5	4.1	2	native
5	4.5	2.6	non-native