Laboratory work #3

Please write SQL queries for following tasks and save as .sql file.

1. Create database called «Student»
2. Create tables:

*Majors* including columns major\_ID (serial, primary\_key, auto increment), major\_name *(string).*

*Student* including columns student\_ID (serial, primary\_key, auto increment), first\_name *(string)*, last\_name *(string)*, date\_of\_birth *(date)*, GPA *(decimal)*, major\_ID serial, FOREIGN KEY (major\_ID) REFERENCES majors (major\_ID), city *(string).*

1. Fill the tables with values:

INSERT INTO majors (major\_ID, major\_name)

VALUES

(1, 'Computer Science'),

(2, 'Mechanical Engineering'),

(3, 'Finance'),

(4, 'Electrical Engineering'),

(5, 'Biology');

INSERT INTO student (student\_ID, first\_name, last\_name, date\_of\_birth, gpa, major\_ID, city)

VALUES

(1, 'Amina', 'Abdulova', '14/05/2003', 3.8, 1, 'Almaty'),

(2, 'Aidar', 'Kazakhov', '23/08/2004', 3.5, 2, 'Astana'),

(3, 'Gulnara', 'Ismailova', '30/11/2005', 3.9, 3, 'Almaty'),

(4, 'Bakhytzhan', 'Nurpeisov', '17/02/2002', 3.2, 4, 'Shymkent'),

(5, 'Ainur', 'Suleimenova', '09/07/2003', 3.6, 5, 'Almaty'),

(6, 'Askhat', 'Yerzhanov', '12/04/2004', 3.7, 1, 'Atyrau'),

(7, 'Aizere', 'Tulegenova', '28/09/2005', 3.4, 3, 'Almaty'),

(8, 'Aruzhan', 'Zhumagaliyeva', '03/12/2003', 3.8, 2, 'Almaty'),

(9, 'Azamat', 'Iskakov', '25/03/2006', 3.5, 4, 'Taldykorgan'),

(10, 'Dana', 'Baibekova', '19/06/2004', 3.9, 3, 'Almaty'),

(11, 'Eldar', 'Bekturov', '07/01/2002', 3.3, 1, 'Almaty'),

(12, 'Emina', 'Kasimova', '14/10/2003', 3.7, 2, 'Astana'),

(13, 'Galymzhan', 'Saparbayev', '02/05/2005', 3.6, 5, 'Almaty'),

(14, 'Gaukhar', 'Nurkhanova', '07/08/2004', 3.4, 1, 'Almaty'),

(15, 'Ilyas', 'Rakhimov', '16/07/2006', 3.8, 3, 'Almaty'),

(16, 'Karlygash', 'Tursynbekova', '09/09/2002', 3.9, 2, 'Shymkent'),

(17, 'Mukhtar', 'Zhumabayev', '22/11/2003', 3.5, 4, 'Almaty'),

(18, 'Nurgul', 'Kenzhebekova', '05/04/2004', 3.7, 1, 'Almaty'),

(19, 'Nurzhan', 'Talgatov', '28/02/2005', 3.6, 5, 'Astana'),

(20, 'Ruslan', 'Karimov', '11/03/2002', 3.4, 3, 'Almaty'),

(21, 'Sanzhar', 'Bakytov', '07/06/2003', 3.8, 2, 'Almaty'),

(22, 'Saule', 'Oralova', '01/10/2005', 3.9, 1, 'Almaty'),

(23, 'Talgat', 'Sarsembayev', '10/12/2004', 3.5, 4, 'Shymkent'),

(24, 'Zarina', 'Kazakhbayeva', '29/01/2003', 3.7, 1, 'Almaty'),

(25, 'Zhibek', 'Tulendiyeva', '31/07/2006', 3.8, 3, 'Almaty'),

(26, 'Azamat', 'Iskakov', '05/09/2002', 3.9, 2, 'Atyrau'),

(27, 'Zhuldyz', 'Nurlanova', '18/08/2005', 3.5, 4, 'Almaty'),

(28, 'Ayaz', 'Mukhametov', '24/02/2004', 3.6, 5, 'Almaty'),

(29, 'Zarina', 'Zhakupova', '06/11/2003', 3.7, 1, 'Almaty'),

(30, 'Arman', 'Sagymbayev', '14/04/2002', 3.8, 3, 'Almaty'),

(31, 'Amina', 'Kanatova', '30/06/2004', 3.9, 2, 'Astana'),

(32, 'Dinara', 'Ospanova', '03/03/2006', 3.5, 4, 'Almaty'),

(33, 'Erlan', 'Tasmagambetov', '27/10/2002', 3.6, 5, 'Almaty'),

(34, 'Zere', 'Yergaliyeva', '20/05/2005', 3.7, 1, 'Almaty'),

(35, 'Ruslan', 'Mukhtarov', '22/07/2004', 3.8, 3, 'Almaty'),

(36, 'Nazerke', 'Nurmukhamedova', '08/09/2003', 3.9, 2, 'Almaty'),

(37, 'Baurzhan', 'Aidarkhanov', '12/12/2002', 3.5, 4, 'Astana'),

(38, 'Aigerim', 'Nurlanova', '16/01/2004', 3.6, 5, 'Almaty'),

(39, 'Nursultan', 'Kulmanov', '13/08/2005', 3.7, 1, 'Almaty'),

(40, 'Aisha', 'Tulegenova', '09/04/2006', 3.8, 3, 'Almaty');

1. Retrieve the students who have a GPA between 3.0 and 3.5 (inclusive).
2. Retrieve the students who have a birthdate in 2004 in alphabetical order.
3. Retrieve the students who have a birthdate before 2003 and are from Shymkent.
4. List students with even-numbered student\_IDs.
5. Find students whose last names start with the letter "A"
6. Find students with maximal and minimal GPA.
7. Find students born in January.
8. Count the number of students born in each year (GROUP BY).
9. Determine the highest GPA for each major (GROUP BY).
10. Calculate the number of students from Almaty born in each month (GROUP BY).