Lab 1.

Part 1. Task 1.1. Relation A:

1) 6 superkeys: {EmpID}, {SSN}, {Email},
{EmpID, Name}, {SSN, Email}, {EmpID, Phone,
Department}.

2) All candidate keys: {EmpID}, {SSN},
{Email}.

3) Primary key: EmpID.
Because, EmpID is usually a systemic and stable identifier that doesn't change over time Unlike email. And SSN is too "global" and risky an identifier.

4) According to the data provided, the numbers are unique, but in reality, employees may same number.

Relation B:

1) Minimum attributes for the primary key: {Student ID}, {CourseCode}, {Section}.

2). Student ID - needed to distinguish between registrations of different students.

Course Code - student can register for different courses, so you need to specify which course.

Section - the same course in the same semester can have several section, so you need to specify the section.

3) Maybe {Semester} and {Year}.

Task 1.2.

fk: Major -> Departments (Dept Code)

AdvisorID -> Professor (Prof ID)

Departments -> Departments (Dept Code)

Departments Code -> Departments (Dept Co

Chair ID → Professor (Prof ID)

Student ID → Student (Student ID)

Course ID → Course (Course ID)