Ex1

A)1. Data collection and system analysis of the subject area.

2. Infological design.

3. Choosing a DBMS.

4. Datalogical design.

5. Physical design.

B)Collecting information and system analysis of the subject area is the first and most important stage in the design of a database. It is necessary to carry out a detailed verbal description of the objects of the subject area and the real connections present between real objects. It is desirable that the description defines the relationships between the objects of the subject area.

Infological design is a partially formalized description of domain objects in terms of some semantic model.The design process is lengthy and requires discussions with the customer and specialists in the subject area. In addition, when developing serious corporate information systems, the database project is the foundation on which the entire system as a whole is built, and the question of the possibility of lending is often decided by the bank's experts on the basis of a competently made infological database project.

The choice of a DBMS is based on various requirements for the database and, accordingly, the capabilities of the DBMS, as well as depending on the available experience of developers.

Datalogical design is a description of a database in terms of an accepted datalogical data model. In relational databases, datalogical or logical design leads to the development of a database schema, i.e. a set of relationship schemas that adequately model the objects of the domain and semantic relationships between objects.

Physical design consists in linking the logical structure of the database and the physical storage environment in order to place data most efficiently, i.e. mapping the logical structure of the database into the storage structure. The issue of placing stored data in memory space, choosing effective methods of access to various components of the "physical" database is being solved, issues of data security and safety are being solved.

Ex3

