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**ABBREVATIONS**

DB – database.

DBMS – database management system.

DDL – Data Definition Language.

ER – Entity-Relationship.

SQL – Structured Query Language.

**INTRODUCTION**

In the modern world, the problem of homeless animals remains relevant and requires effective solutions. Animal shelters play an important role in ensuring the care and protection of homeless animals, their treatment and finding new homes. The functioning of such institutions requires the correct organization of all work processes and proper information management.

Automation of animal shelter management processes using a specialized information system allows you to significantly increase the efficiency of the institution. Such a system provides centralized storage and quick access to information about animals, simplifies accounting, helps organize the work of staff and generates the necessary reporting.

The purpose of this work is to develop an information system for managing an animal shelter, which will allow you to automate the main work processes of the institution. The system is designed to keep records of animals in the shelter, manage information about their health and vaccinations, organize the work of staff and generate the necessary reporting.

To achieve this goal, it is necessary to solve the following tasks:

- analyze the subject area and determine the main requirements for the system;

- design the database architecture;

- develop software to automate key processes;

- ensure the generation of the necessary reporting.

**1 ANALYSIS OF THE SUBJECT AREA**

**1.1 Business rules system**

Functional requirements for the information system "Animal Shelter" should be aimed at effective management of the animal shelter, ensuring a high level of animal care and optimizing all aspects of its activities.

The following business requirements have been identified:

- animal data management (storage and management of animal data - information about health, character, behavior, disease history, etc.);

- personnel work organization (organization of the work of the shelter staff, such as work planning, timekeeping, task management and reporting to management);

- analytics and reporting (data analysis and reports, such as reporting on the work of the shelter, statistics on animals and employees).

It has also been analyzed what requirements users have for the developed information system.

**1.1.1 Modeling of the subject domain**

The domain model in ER (Entity-Relationship) notation is shown in Figure 1.1.

**1.1.1.1 Setting the problem**

To achieve the goal of the work, it is necessary to perform the following tasks:

1 Develop a logical model of the database.

2 Develop a physical model of the database.

3 Describe the structure of the database.

4 Implement the database in the MySQL database management system (DBMS) using DDL (Data Definition Language) commands.

5 Fill the database with initial records and develop queries in SQL (Structured Query Language).

**CONCLUSIONS**

The coursework was devoted to keeping records of animals in the shelter and creating a convenient desktop application for entering information and viewing reports. The following tasks were set and completed:

1 A logical database model was developed.

2 A physical database model was developed.

3 The database structure was described.

4 The database was implemented in the MySQL database management system (DBMS) using DDL (Data Definition Language) commands.

5 The database was filled with initial records and queries were developed in SQL (Structured Query Language).

6 An application for working with the database was developed.

7 The use of the application for working with the database was demonstrated.

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# APPENDIX A