**Laboratory work 1.** ERD diagram.

1. **Identify Entities:**

* Airport
* Airline company
* Flight
* Booking
* Ticket
* Passenger
* Baggage
* Booking\_update
* Passenger\_security\_check
* Baggage\_security\_check
* BoardingPass

1. **Determine Attributes**

* Airport: Id(PK), name, country, city, data\_updated, data\_Created, state
* Airline company: name, country, data\_updated, data\_Created
* Flight: id(PK), airline\_id(FK), departing\_airport\_id(FK), arriving\_gate, arriving\_airport\_id(FK), departing\_gate, scheduled\_departure\_time, scheduled\_arrival\_time, actual\_departure\_time, actual\_arrival\_time, data\_created, data\_updated
* Booking: Id(PK), status, booking\_platform, price, data\_created, data\_updated
* Ticket: Id(PK), booking\_id(FK), flight\_id(FK), passenger\_id(FK), seat\_number, boarding\_time, data\_created, data\_updated
* Passenger:id(FK), first\_name, last\_name, gender, birth\_date, country\_of\_citizenship,country\_of\_residence, passport\_number, data\_created, data\_updated
* Baggage:id(PK), ticket\_id(FK), weight, data\_created, data\_updated
* Booking\_update: id(PK), booking\_id(FK), description
* Passenger\_security\_check:id(PK), passenger\_id(FK), status, data\_created, data\_updated
* Baggage\_security\_check: id(PK),baggage\_id(FK), check\_status, data\_created, data\_updated
* BoardingPass:boarding\_pass\_id (PK), boarding\_time, data\_created, data\_updated

1. **Normalization and Identify Relationships:**

Airport –Flight (one to many)

Airline – Flight (one to many)

Flight – Ticket (one to many)

Booking – Ticket (one to many)

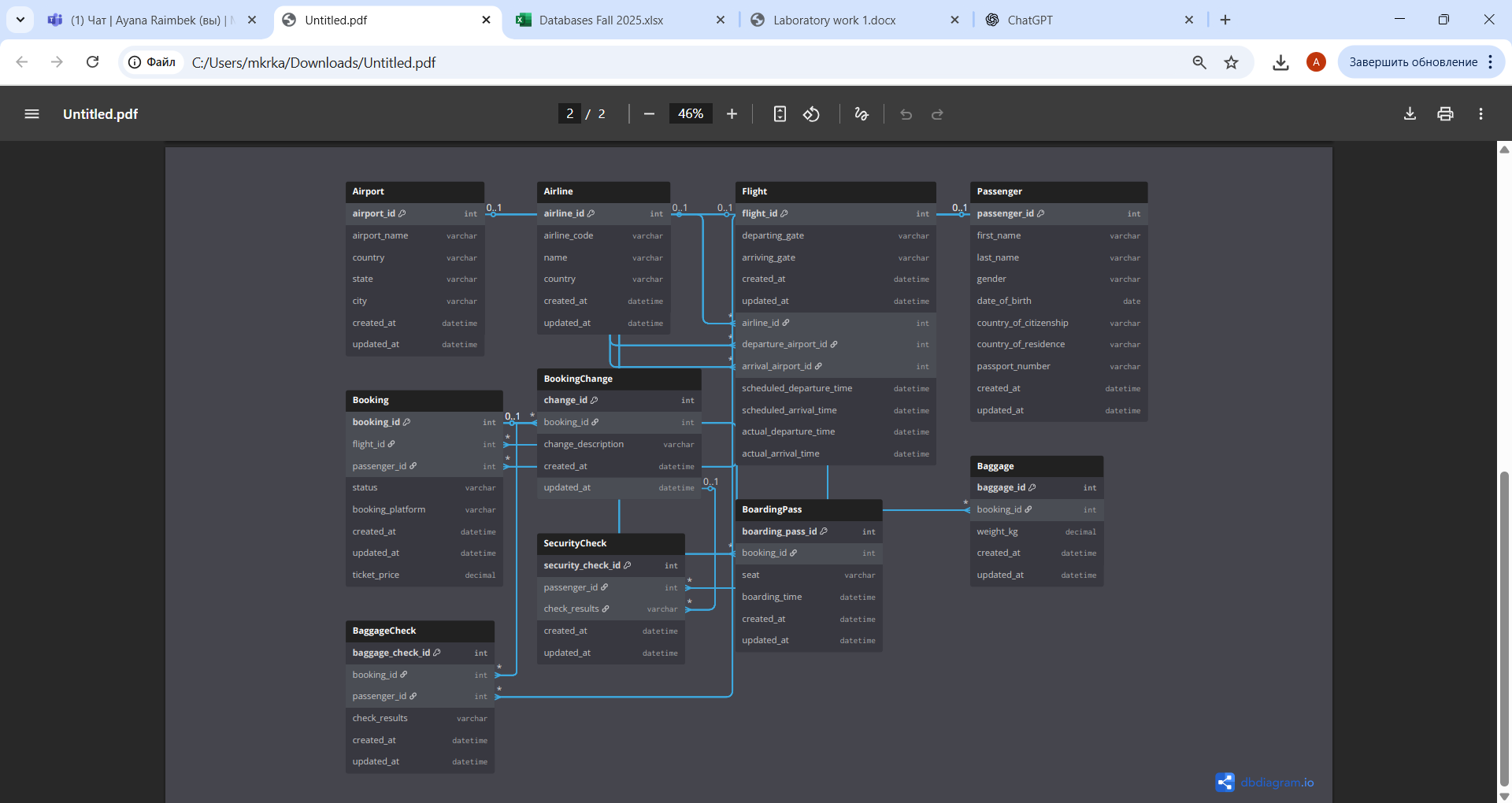
Passenger – Ticket (one to many)

Ticket – Baggage (one to many)

Baggage – Baggage\_security\_check (one to one)

**Изображение выглядит как текст, снимок экрана, программное обеспечение, Мультимедийное программное обеспечение

Содержимое, созданное искусственным интеллектом, может быть неверным.**



1. **Documenting diagram:**

**Entity-Relationship Diagram (ERD):**  
The ERD has been created using a tool such as Diagram.io. Each entity is represented as a rectangle containing a list of attributes, with primary keys (PK) and foreign keys (FK) clearly indicated. Relationships between entities are shown using lines, with appropriate cardinality labels.

**Conclusion:**  
This document provides a description of the core components of the airport database, including entities, attributes, relationships, and normalization to the Third Normal Form (3NF). Based on the specification given, a visual ERD diagram can be created. This solution fully meets the requirements set for Laboratory Work 1.