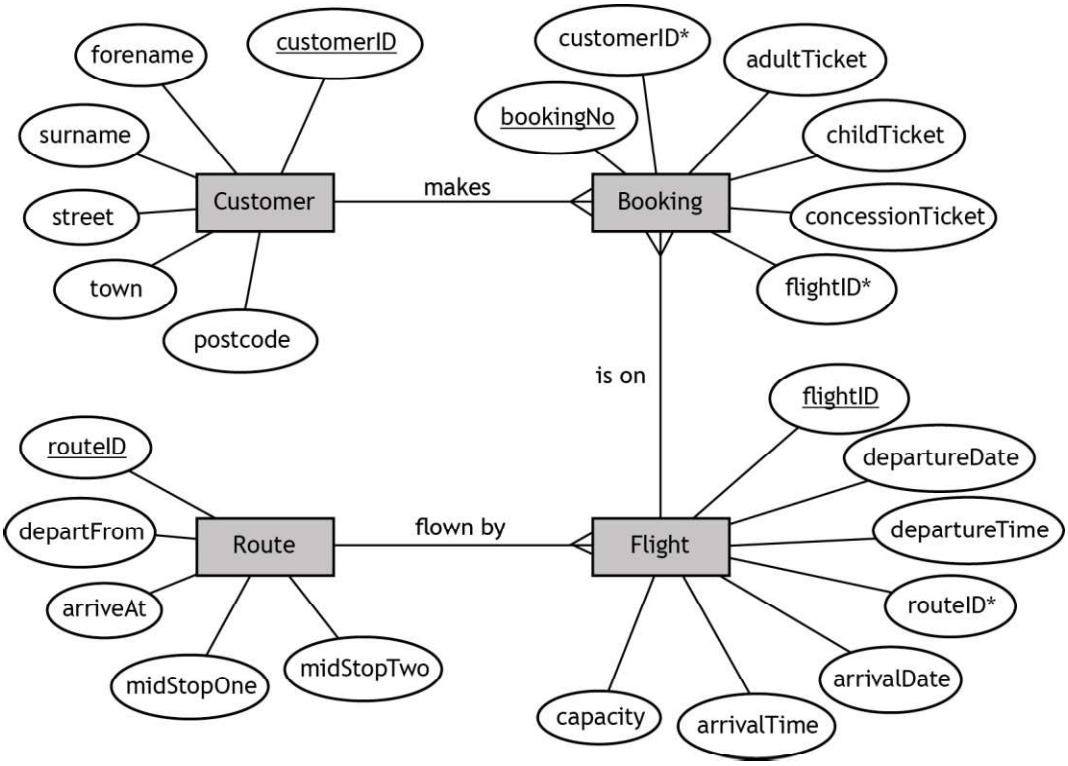
## Task 1: database design and development (part B)

Following further analysis the entity-relationship diagram below is created.




This design is then implemented.

Your teacher or lecturer will provide you with a completed database file.
This file contains a relational database with the following tables.

| **Flight Booking Database** | | | |
|---|---|---|---|
| **Customer** | **Booking** | **Flight** | **Route** |
| customerID | bookingNo | flightID | routeID |
| forename | adultTicket | departureDate | departFrom |
| surname | childTicket | departureTime | arriveAt |
| street | concessionTicket | arrivalDate | midStopOne |
| town | customerID* | arrivalTime | midStopTwo |
| postcode | flightID* | capacity | |
| | | routeID* | |

1b(i) John Smith, Customer ID - GR01932, has asked for a copy of the tax he has paid on flight QH182. The tax for a booking is calculated as follows:

- adults pay £5.50
- children pay £2.00
- concessions pay £1.50

Implement the SQL statement that will produce an output with the headings.

| forename | surname | Tax (£) |
|---|---|---|
| | | |

Print evidence of the implemented SQL statement and the output it produced.

**(3 marks)**

1b(ii) The airline wishes to identify the customer(s) who made a booking with the greatest number of children.

Implement two SQL statements that will find the forename and surname of the customer(s) who made a booking with the greatest number of children.

| forename | surname |
|---|---|
| | |

Print evidence of the implemented SQL statements and the output produced.

**(4 marks)**

1c The database has primary key fields but has no other validation. Evaluate two potential problems that may occur when adding new data to the Flight table.

| |
|---|
| Problem 1<br><br>**(1 mark)** |
| Problem 2<br><br>**(1 mark)** |

Candidate name_____ Candidate number_____