**Hópvekefni 1**

***Date:******15-01 -2018****, Tækniskolinn***. *Due:******22-01-2018***

A Country Bus Company owns a number of busses. Each bus is allocated to a particular route, although some routes may have several busses. Each route passes through a number of towns. One or more drivers are allocated to each stage of a route, which corresponds to a journey through some or all the towns on a route. Some of the towns have a garage where busses are kept and each of the busses are identified by the registration number and can carry different numbers of passengers, since the vehicles vary in size and can be single or double-decked. Each route is identified by a route number and information is available on the average number of passengers carried per day for each route. Drivers have an employee number, name, address, and sometimes a telephone number.

1. Read the test carefully, list all possible entities?

**Entities:**

-**Driver(employee nr, name, addr,phone nr)**

-**Route(route nr, avg\_passngr)**

**-Bus(regr nr, nr\_of passgr,decks)**

**-Town(name)**

**-Garage(garage\_id, nr. buses**)

-**Stage(stage\_nr)**

1. Write down the relationships between entities with their cardinalities?

**Relationships: cardinalities**

**Bus – Route (allocated\_to) many to one**

**Driver – Stage(allocated) many to one**

**Town – Garage(have) many to one**

**Route – Town(passes) one to many**

1. Draw an ER (Entity Relationship) diagram with all possible entities, their relationships, and cardinalities?

**ER Diagram:**

1. List all possible attributes of the entities and define primary and foreign keys?
2. Draw an ERD Mapping that depicts all the entities, their attributes and link the foreign keys to their appropriate primary keys?

*Abdel*

*[[1]](#endnote-1)*

1. *Note: Each group should submit the project in word or pdf format before the due date.* The project has weight of 5%. [↑](#endnote-ref-1)