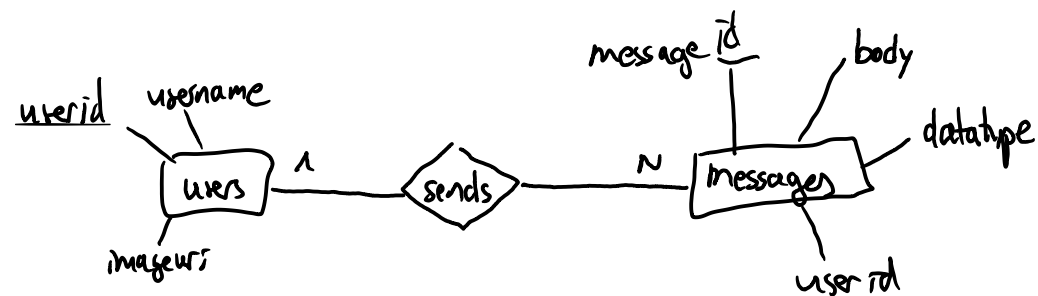


### ER-diagram



### Conversion into relations:

Users ( int userid, varchar username, varchar imageurl )

Messages ( int messageid, int user id, varchar datatype, varchar body )

Annotations for Messages:

- int messageid: primary key
- int user id: foreign key, not null
- varchar datatype:  $\in \{ \text{.txt}, \text{.jpg}, \text{.png} \}$

Annotation for body:

varchar body

- base 64 encoded text, if datatype = .txt
- s3 bucket key of image, else