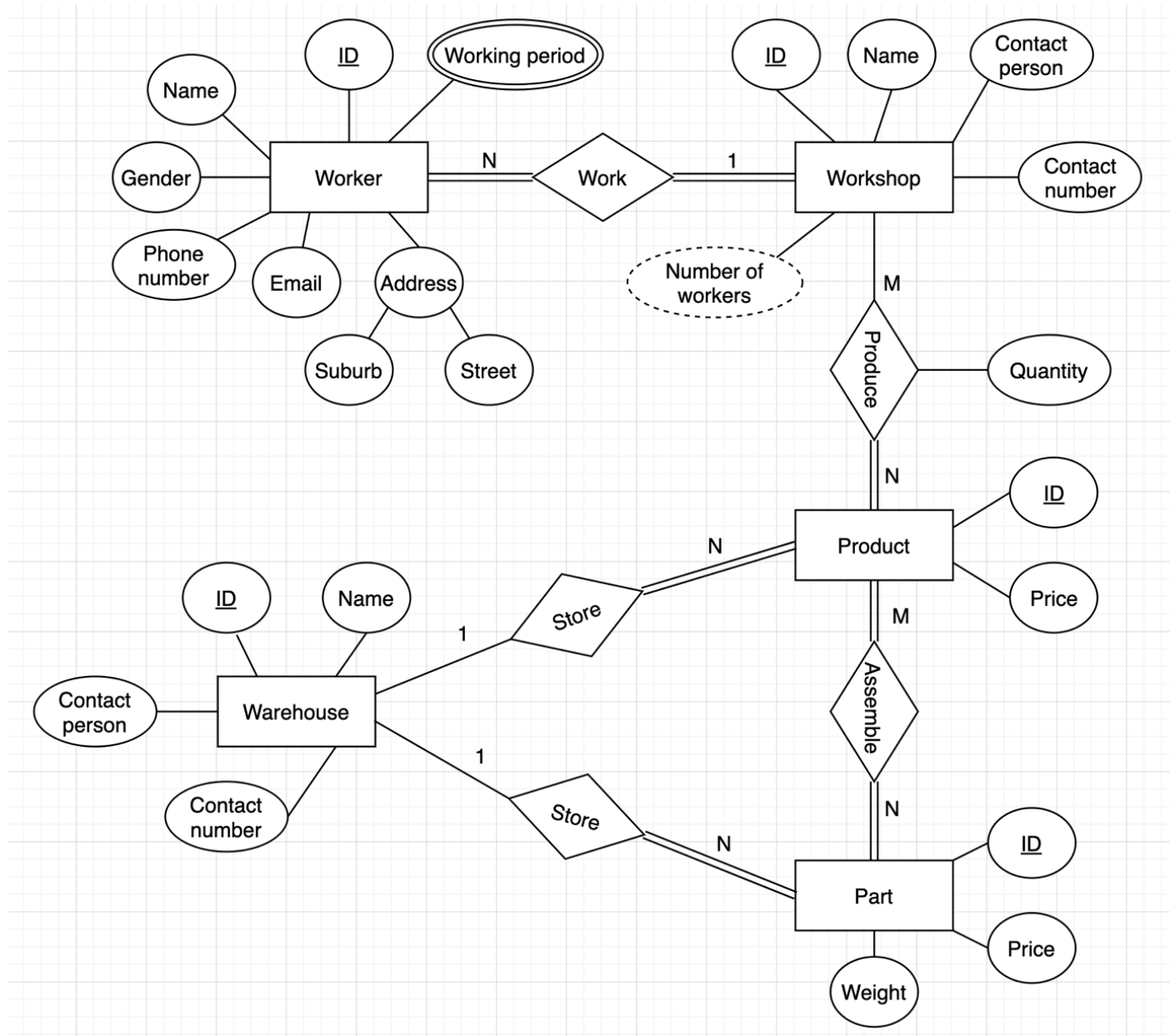


COMP9311 Assignment 1

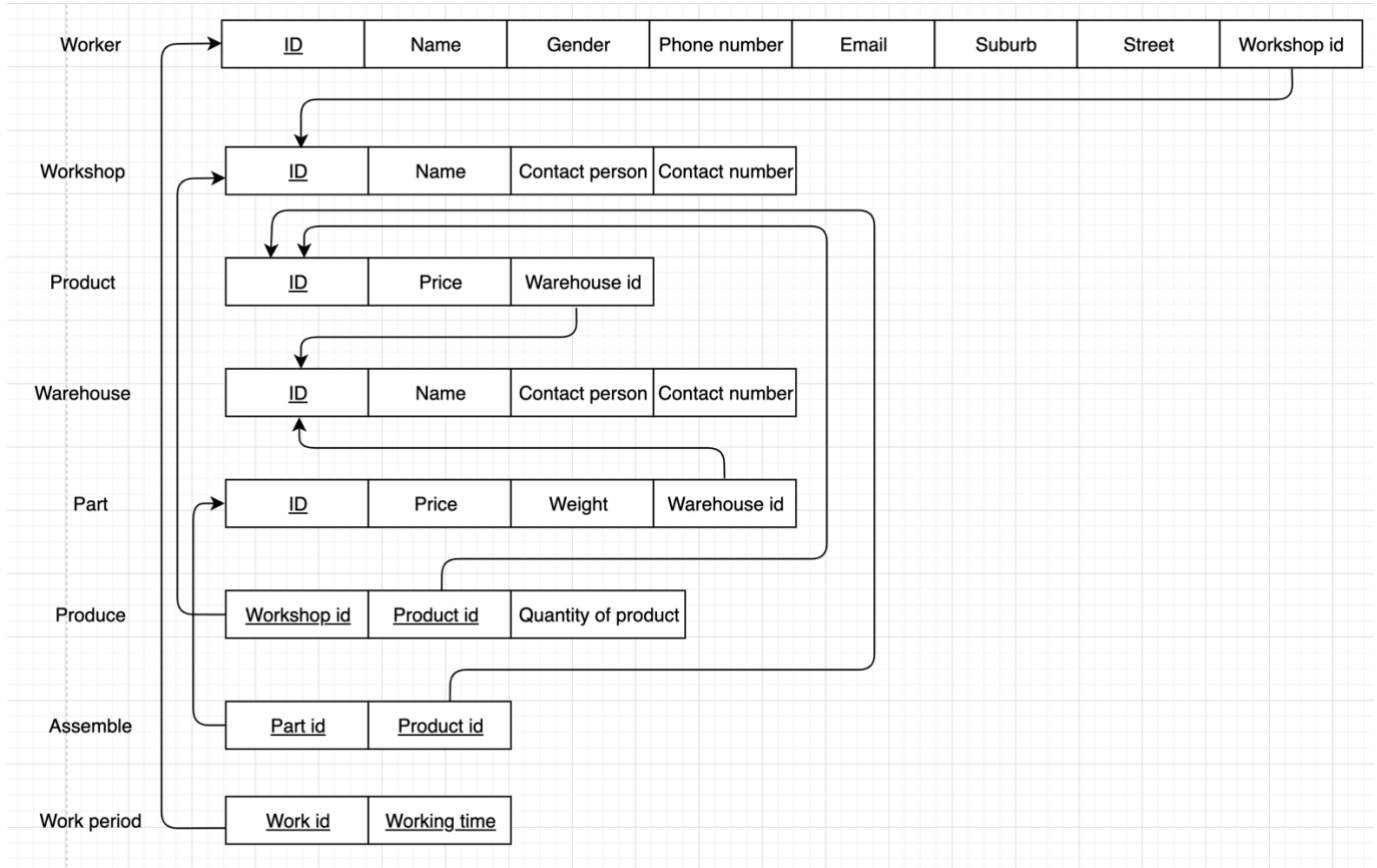
Student Name: Yi Ren

Student ID: z5139760

Q1.



Q2.



Q3.

a. $\pi_{\{pName\}}(Customer \bowtie Sale \bowtie SalePerson \bowtie (\sigma_{dName="Sydney City Toyota" \text{ AND } location="Waterloo"} CarDealership))$

b. $\pi_{\{sName\}}(SalePerson \bowtie (Sale \div \pi_{\{brand\}}(Car)))$

c. $A \leftarrow \pi_{\{dName\}}(CarDealership \bowtie SalePerson \bowtie Sale \bowtie (\sigma_{brand="Audi"}(Car)))$

$B \leftarrow \pi_{\{dName\}}(CarDealership \bowtie SalePerson \bowtie Sale \bowtie (\sigma_{brand="Mazda"}(Car)))$

Answer = $A - B$;

d. $A \leftarrow \pi_{\{pName\}}(Customer \bowtie Sale \bowtie (\sigma_{condition="brand-new"}(Car)))$

$B \leftarrow \pi_{\{pName\}}(Customer \bowtie Sale \bowtie (\sigma_{condition="used"}(Car)))$

Answer = $(A - B) \cup (B - A)$