Lab Assingment 1

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Questions:

1. Write the following facts (English Statement) in Prolog. Now, use these statements as knowledge based for answering the following Queries. Use following facts: i) occupation/2 ii) address/2 iii) salary/2 for knowledge base creation.

1. Marry is a teacher.
2. Mili is a doctor.
3. Bunny is a teacher
4. Gini is a doctor.
5. Marry lives in Surat.
6. Bunny lives in Vadodra.
7. Gini lives in Ahemdabad.
8. Mili lives in Rajkot.
9. Marry earns fortythousand rupees.
10. Mili earns fiftythousand rupees.
11. Bunny earns seventythousand rupees.
12. Gini earns sixtythousand rupees.

Code:

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% assign1.pl

occupation(marry, teacher).
occupation(mili, doctor).
occupation(bunny, teacher).
occupation(gini, doctor).

address(marry, surat).
address(mili, rajkot).
address(bunny, vadodra).
address(gini, ahmedabad).

salary(marry, fortythousand).
salary(mili, fiftythousand).
salary(bunny, seventythousand).
salary(gini, sixtythousand).
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Queries:
1. Find all teachers who lives in Surat.

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?- findall(Who, (occupation(Who, teacher), address(Who, surat)),
TeachersInSurat).
TeachersInSurat = [marry].
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2. Find all doctors who earns sixtythousand rupees.

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?- findall(Who, (occupation(Who, doctor), salary(Who,
sixtythousand)), DoctorsWithSixtyThousandSalary).
DoctorsWithSixtyThousandSalary = [gini].
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3. Find all teachers who doesnot live in Ahmedabad.

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?- findall(Who, (occupation(Who, teacher),\+ address(Who,
ahmedabad)), Teachersnotinahmedabad).
Teachersnotinahmedabad = [marry, bunny].
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4. Find all teacher who lives in Rajkot.

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?- findall(Who, (occupation(Who, teacher), address(Who, rajkot)),
TeachersInRajkot).
TeachersInRajkot = [].
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5. Find all doctors who lives in Ahmedabad and earns sixtythousand rupees.

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?- findall(Who, (occupation(Who, doctor), address(Who, ahmedabad),
salary(Who, sixtythousand)),
DoctorsInAhmedabadWithSixtyThousandSalary).
DoctorsInAhmedabadWithSixtyThousandSalary = [gini].
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6. Find all teachers who lives in Surat or Vadodra.

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?- findall(Who, (occupation(Who, teacher), (address(Who, surat);
address(Who, vadodra))), TeachersInSuratOrVadodara).
TeachersInSuratOrVadodara = [marry, bunny].
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