

1. The City of Toronto is interested in the density of the courses group by different sections in different wards, so that they can adjust the courses density to fit into citizen's needs. For example, if a ward has very few preschool courses, then more preschool courses should be added in the area. Report ward, section, density(number of courses/area).
  - 1.1 report highest density section of a ward
  - 1.2 report all the courses, location of the above section in the ward
  - 1.3 report the number of missing ward for each section
  - 1.4 report sections that all wards have courses about
  - 1.5 report sections that only one ward is missing
  
2. Marry is an old lady who is 82 years old. She still likes to learn new things, so she decided to take courses starting in April in 2015, but she can't drive a car. She lives near Agincourt Recreation Centre and wants to take the courses there. All courses should be held only one day a week. Report Course\_Barcode, name, Days\_of\_the\_week, start\_hour, section.
  - 2.1 Marry wants to take a swimming course on Sunday, and take a non-swimming course another day in the week. Report course\_barcode, name, days\_of\_the\_week, and start\_hour of the two courses.
  
  - 2.2 Marry wants to take the private swim lessons in the sunday afternoon(time > 12) for the swimming course, and take either non-swimming course.
  
3. Karen wants to find a swimming course in 2015. She lives in Scarborough, and she has a busy schedule since she has to work from Monday to Friday. So she wants to find a swimming course that meets the following requirements.
  - a. Only takes place at weekends
  - b. Location is in Scarbrough east
  - c. Total course hour is 2-10 hours inclusive.
  - d. The course is for adults.
  - e. The Registration session is Spring.

Report Course\_Barcode, location, program, Days\_of\_the\_week, Start\_month, Start\_day, start\_hour

3.1 After getting the result from the above question, Karen found that the course 2760451 is exactly what she wants since the location is close to her house, and the time perfectly matches her schedule, so she wants to know if she can register the course or not. She can register the course if there are some spaces available, and she satisfies all the requirements for the courses(She is 25 years old). Report the barcode and space if she can register.