Consider the following corporate project management dataset, where Emp.mgrno is a foreign key for Emp(eno) used to model the management chain in the company, Work.empno is a foreign key for Emp.eno, and Work.pno is a foreign key for Proj.pno. (Note: Some employees near the top of the management chain will not have an official manager.) Assume that employee salaries and project budgets are given in dollars (per year) and that employee ages are optional and given in years when they are available. Also assume that some employees may not currently be assigned to projects, and some projects may be empty of employees. Write each of the queries that follow in SQL.

\[
\begin{align*}
\text{Emp} & (\text{eno}, \text{ename}, \text{salary}, \text{age}, \text{mgrno}) \quad \text{-- the usual info about employees} \\
\text{Work} & (\text{empno}, \text{pno}, \text{pcttime}) \quad \text{-- emps can split their time between projects} \\
\text{Proj} & (\text{pno}, \text{pname}, \text{category}, \text{budget}) \quad \text{-- some basic info about projects}
\end{align*}
\]

1. (2 points) Print the numbers and names of all employees who are less than half as old as their manager:

2. (3 points) Print the names of employees who spend some part of their time working in every project in the ‘Mission Critical’ category.
3. (2 points) Print a list of projects and staffing that includes the project numbers, project names, project budgets, employee numbers, employee names, and percent times of all project employees. Be sure to include projects that are currently unstaffed in your list.

4. (3 points) Print a project metrics report that lists, for each project, all of the project’s attributes plus its number of assigned employees (regardless of the percent-time of their assignment to the project) and also their average age.