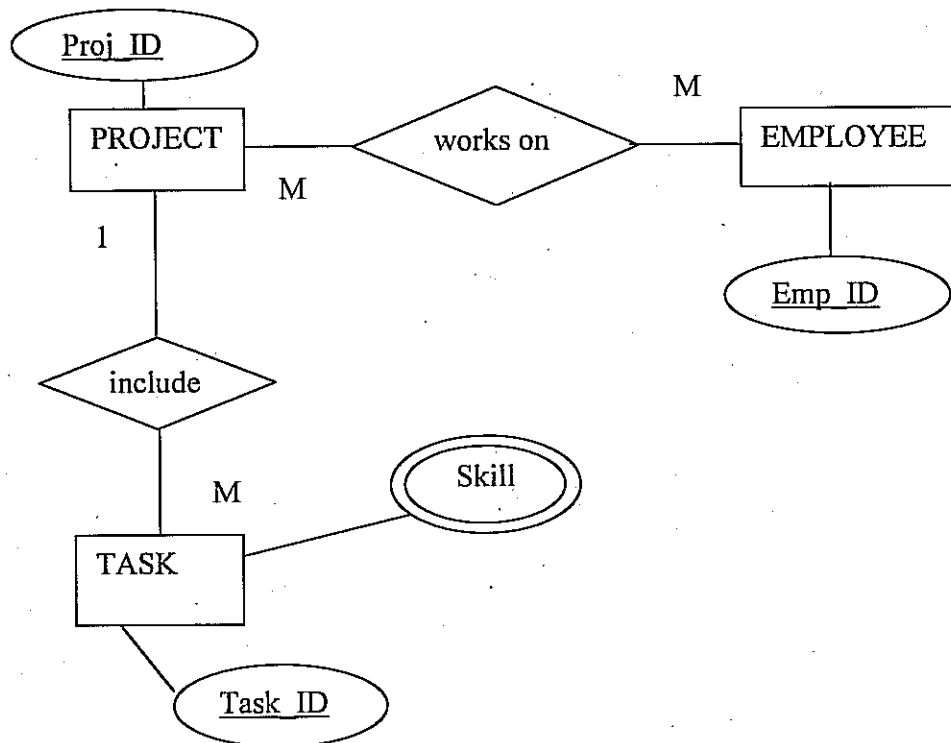




Answer ALL Questions.

1. Based on the E-R diagram below, answer the following questions. In each case, give reasons or an appropriate example to support your answer:



- How many projects can an employee work on?
- How else might the attribute Skill be modelled?
- Is it possible to attach attributes to the *includes* relationship? If yes, give an example; if no, explain the reason.
- For a project that a particular employee is working on, is it possible to identify which tasks are included in that project the employee is undertaking? Explain your answer.

2. A system is to be developed to support the operation of a firm that specializes in providing reviews of published books. Develop an Entity Relationship diagram for the system based on the following description:

Basic details of books that have been, or are about to be, reviewed are to be kept. These details include the ISBN of the book as well as its title, number of pages, publisher and price. The name of the author or editor of each book is also to be recorded although it is, of course, also possible that a book can have more than one author or more than one editor. Books are classified into novels, which always have one or more authors and never an editor, and non-fiction works such as reference books, anthologies and other works all of which can be either authored or edited. (The difference is that an author actually *writes* a book whereas an editor *chooses* and *edits* the work of others for inclusion in the book.)

The topic(s) covered by a reference book are to be stored in the system as is the list of works included in an anthology. Books other than novels can come out in successive editions (1st edition, 2nd edition, and so on) and each such edition has a different and unique ISBN and may also have, although not often, one or more different authors or editors compared to the previous edition(s), and sometimes even a slightly different title.

While a book can have zero or only one review, in general there will be many for any particular book. Each review is identified by the book of which it is a review and the reviewer's name. Of course, no book is reviewed by the same reviewer twice and, naturally, the text of what the reviewer has written about the book is to be held in the system too.

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