**Explain why according to the COCOMO model, when the size of a software is increased by two times, the time to develop the product usually increases by less than two times.**

**Step 1:**

In 1981, Boehm put forth the COCOMO (Constructive Cost Estimation Model). One of the most widely used software estimating models worldwide is COCOMO. Based on the size of the programme, COCOMO forecasts the time and effort required to produce a software product.

The basic COCMO model is useful for estimating the cost of software quickly and roughly. Its accuracy is limited by the fact that it does not take into account variations in hardware constraints, personal qualities and experiences, the usage of contemporary tools and methodologies, and other project attributes known to have a substantial impact on software cost. The project parameters are given as a rough approximation.

**Step 2:**

Plotting the estimated features for various software sizes can provide some insight into the fundamental COCOMO model. The effort seems to be a little out of proportion to the size of the software output, as can be seen. As a result, the amount of work needed to build a product rises dramatically with project size.

The effort and size of the software product are rather superlinear. As a result, the amount of work needed to build a product rises dramatically with project size.

Sometimes, even though a product's size doubles, the time it takes to develop it does not, instead, only slightly increase.

It should be mentioned that the estimates of the effort and the duration made using the COCOMO model are called as nominal effort estimate and nominal duration estimate.

This category includes software projects with the greatest levels of complexity, inventiveness, and experience requirements. In comparison to the other two models, this software needs a larger team, and the programmers must have the necessary expertise and imagination to create such intricate models.

As is clear from the calculation, the effort is expressed in Person-Months and depends on Kilo-Lines of code. The length of development is expressed in months. Due to the lack of consideration given to many elements, such as dependability and experience, the estimate is approximate when using these formulas in the Basic Model calculations.