HW11

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**Summary：**

During the lecture, I gave several examples where as a development leader I would use "Empirical software engineering" to gain insight into key leadership decisions. For this assignment, detail one use case (not one that I covered in class) where you would use the empirical software engineering process to find an answer to a leadership question. Make sure you include the following:

Hypothesis: Using the Form component will improve the efficiency of doing web development with Django

Independent variable: the amount of code required to complete a form filling operation development

Dependent variable: time to complete a form filling operation

Conclusion validity risk: the sample size is too small and the developer has statistical errors in the test

Construct validity risk: test the efficiency of development and record data at the wrong time

Internal validity risk: Unknown program or function errors affecting the time of a single development session

External Validity risk: The number of programmers using python Django development is not as many as those using C++ and Java, so the generality of the conclusions may not be wide enough.

Data collection: developers need to collect manually, the amount of development code and development time of single time using basic development to complete form filling, the amount of development code and development time of single time using Form component to complete form filling.

Decision making: First of all, the development team leader needs to confirm that the collected data is valid and correct. The same collection frequency needs to be ensured for different feature development. If the data shows that the amount of software development code decreases and the development time decreases after using the Form, then the Form component will be used for development. In the opposite case, it will be kept as it is.