# COCOMO2 cheat sheet

## COCOMO2 purpose

Formula to determine how long it takes to finish a project.

It superseded COCOMO1, because it takes into account different factors than COCOMO1, which makes it more accurate.

## COCOMO2 awesome formula

**pm = A(size)^sf  x  em**

A = 2.94

size = thousands of lines of code (you will need to get this using my functions, but until Sunday's meeting, just **use a fixed number of "5"** for now)

sf = ? (we need to find it out, by asking some questions, then mapping the question's answers to numbers)

em = ? (we need to find it out, by asking some questions, then mapping the question's answers to numbers)

So yeah... we need to find out sf & em - lets make some questions!

## Questionnaire #1 to determine sf (scale factor)

1) Team's level of experience with similar projects in the past?

answer choices (HTML radio buttons) = very low, low, nominal, high, very high, extra high

2) How flexible are the requirements?

answer choices (HTML radio buttons) = very low, low, nominal, high, very high, extra high

3) How likely are requirements to NOT change halfway during project?

answer choices (HTML radio buttons) = very low, low, nominal, high, very high, extra high

4) How much is your team physically & emotionally close? (i.e.: team cohesion)

answer choices (HTML radio buttons) = very low, low, nominal, high, very high, extra high

5) How formal is the team's process for developing software?

answer choices (HTML radio buttons) = very low, low, nominal, high, very high, extra high

*Based on the 5 answers given above, use formula from slide #36 in "5.Software Effort Estimation.pdf" to get "Scale Factor"*

## Questionnaire #2 to determine em (effort multipliers)

<similar to questionnaire #1, see slide #37 in "5.Software Effort Estimation.pdf">

*Based on the answers given in this questionnaire, use formula from slide #38 in "5.Software Effort Estimation.pdf" to get "Scale Factor"*

## After the answers from the 2 questionnaires above, you will have the following math variables:

**A** (a constant of 2.94)

**size** (until Sunday's meeting, your using a fixed number of "5")

**sf** (scale factor)

**em** (effort multiplier)

## *drumroll* ... so let's finally the COCOMO2 formula to find out how long a project is gonna take!

(From on slide #32 in "5.Software Effort Estimation.pdf")

months to finish project = **A**(**size**)^**sf**  x  **em**

## Example "filled in" formula

Months to finish project = **2.94**(**5**)^**2**  x  **4**

= 294 **man** months (if only 1 man worked on the project. If 2 men work on the project, the project will only take 147 months)

## Questions?