

CoCoMo Estimation:

We are going to use the LOC from similar projects to gain a sense of what to expect.

Similar Project #1: <https://github.com/tastyigniter/TastyIgniter>

Results

File Type	Files	Lines of Code	Total lines
PHP	643	48068	59104
Text	4	0	176
Stylesheets	38	14739	18394
JavaScript	157	27401	32671
Json	16	5629	5629
Xml	1	30	30

We are interested in PHP, Stylesheets, JavaScript, Json and XML. The total LOC for those are: $48068 + 12739 + 27401 + 5629 + 30 = 93867$.

LOC = 93867

Similar Project #2: <https://github.com/agriya/OFOS>

Results

File Type	Files	Lines of Code	Total lines
Text	4	0	156
Stylesheets	16	13876	14431
Html	80	4479	4543
JavaScript	258	32658	38633
Json	26	11116	11116
PHP	195	36643	38540
Xml	1	9	9
Shell	2	24	46

$13876 + 4479 + 32658 + 11116 + 36643 + 9 + 24 = 98805$

LOC = 98805

We can take the average of these two projects and assuming our project will be in a similar range for LOC.

Average LOC = $(93867 + 98805) / 2$

Average LOC = 96336

Only 1 person in our team has experience with Web Development. The other two are stronger in Java and C++. This project is a bit complex considering the inexperience of the team. Therefore we will be considering this a Semi-Detached project.

Effort:

$$A = 3.0 \ B = 1.12$$

$$E = A(KLOC)^B$$

$$E = 3.0(96)^{1.12}$$

$$E = 498.04 \text{ person-months}$$

Duration:

$$A = 2.5 \ B = 0.35$$

$$D = A(E)^B$$

$$D = 2.5(498.04)^{0.35}$$

$$D = 21.98$$

$$D = 22 \text{ months}$$