A software project is estimated to have 20,000 LOC. The development team consists of 5 programmers who can develop 150 LOC per day. How many days will it take to complete the project?

To determine the number of days required to complete the project, we need to calculate the total number of lines of code (LOC) that can be developed per day by the team.

Given:

- Number of programmers: 5

- LOC developed per day by each programmer: 150

To find the total LOC developed per day by the team, we multiply the number of programmers by the LOC developed per day by each programmer:

Total LOC developed per day = Number of programmers \* LOC developed per day by each programmer

= 5 \* 150

= 750

Now, we can calculate the number of days required to complete the project by dividing the total LOC of the project by the total LOC developed per day:

Number of days = Total LOC / Total LOC developed per day

= 20,000 / 750

≈ 26.67

Since we cannot have fractional days, we round up the number of days to the nearest whole number:

Number of days ≈ 27

Therefore, it will take approximately 27 days for the team of 5 programmers to complete the software project.

A company estimates that a software project will require 50,000 LOC. The team will consist of 8 programmers, who can develop 120 LOC per day. What is the estimated duration of the project?

To determine the estimated duration of the project, we need to calculate the total number of days required to complete the project.

Given:

- Number of programmers: 8

- LOC developed per day by each programmer: 120

- Total LOC of the project: 50,000

To find the total LOC developed per day by the team, we multiply the number of programmers by the LOC developed per day by each programmer:

Total LOC developed per day = Number of programmers \* LOC developed per day by each programmer

= 8 \* 120

= 960

Now, we can calculate the number of days required to complete the project by dividing the total LOC of the project by the total LOC developed per day:

Number of days = Total LOC / Total LOC developed per day

= 50,000 / 960

≈ 52.08

Since we cannot have fractional days, we round up the number of days to the nearest whole number:

Number of days ≈ 53

Therefore, the estimated duration of the project is approximately 53 days.

A software project is estimated to have 40,000 LOC. The team will consist of 4 programmers, who can develop 80 LOC per day. The project will run for 20 weeks. What is the total estimated effort for the project in person-months?

To calculate the total estimated effort for the project in person-months, we need to consider the number of programmers, their productivity in LOC per day, and the project duration in weeks.

Given:

- Number of programmers: 4

- LOC developed per day by each programmer: 80

- Total LOC of the project: 40,000

- Project duration: 20 weeks

First, let's calculate the total LOC developed per day by the team:

Total LOC developed per day = Number of programmers \* LOC developed per day by each programmer

= 4 \* 80

= 320

Next, we need to determine the total number of working days for the project. Since the project runs for 20 weeks, and assuming a typical workweek of 5 days, we multiply the number of weeks by 5:

Total working days = Project duration in weeks \* Number of working days per week

= 20 \* 5

= 100

Now, we can calculate the total person-days required to complete the project by multiplying the total working days by the LOC developed per day:

Total person-days = Total working days \* Total LOC developed per day

= 100 \* 320

= 32,000

Finally, to convert person-days into person-months, we divide the total person-days by the average number of working days in a month (assuming a 22-day month):

Total person-months = Total person-days / Average number of working days in a month

= 32,000 / 22

≈ 1,454.54

Therefore, the estimated effort for the project is approximately 1,454.54 person-months.

Q. A company estimates that a software project will require 75,000 LOC. The team will consist of 10 programmers, who can develop 100 LOC per day. The project is expected to take 6 months. What is the total estimated effort for the project in person-months?

To calculate the total estimated effort for the project in person-months, we need to consider the number of programmers, their productivity in LOC per day, and the project duration in months.

Given:

- Number of programmers: 10

- LOC developed per day by each programmer: 100

- Total LOC of the project: 75,000

- Project duration: 6 months

First, let's calculate the total LOC developed per day by the team:

Total LOC developed per day = Number of programmers \* LOC developed per day by each programmer

= 10 \* 100

= 1,000

Next, we need to determine the total number of working days for the project. Since the project is expected to take 6 months, and assuming a typical work month of 22 days, we multiply the number of months by the number of working days in a month:

Total working days = Project duration in months \* Number of working days per month

= 6 \* 22

= 132

Now, we can calculate the total person-days required to complete the project by multiplying the total working days by the LOC developed per day:

Total person-days = Total working days \* Total LOC developed per day

= 132 \* 1,000

= 132,000

Finally, to convert person-days into person-months, we divide the total person-days by the average number of working days in a month (assuming a 22-day month):

Total person-months = Total person-days / Average number of working days in a month

= 132,000 / 22

= 6,000

Therefore, the estimated effort for the project is 6,000 person-months.

Q; A software project is estimated to have 25,000 LOC. The team will consist of 6 programmers, who can develop 125 LOC per day. The project has a deadline of 3 months. What is the minimum number of programmers required to complete the project within the deadline?

To determine the minimum number of programmers required to complete the project within the deadline, we need to calculate the total number of working days available to complete the project and then divide it by the number of working days required by each programmer to develop the specified amount of lines of code (LOC).

Given:

- Total LOC of the project: 25,000

- LOC developed per day by each programmer: 125

- Project deadline: 3 months

First, let's calculate the total number of working days available to complete the project. Assuming a typical work month of 22 days:

Total working days = Project deadline in months \* Number of working days per month

= 3 \* 22

= 66

Next, we need to calculate the number of LOC developed per day by the team:

Total LOC developed per day = Number of programmers \* LOC developed per day by each programmer

= 6 \* 125

= 750

Now, we can calculate the minimum number of programmers required to complete the project within the deadline by dividing the total LOC of the project by the total LOC developed per day:

Minimum number of programmers = Total LOC / (Total LOC developed per day \* Total working days)

= 25,000 / (750 \* 66)

≈ 5.05

Since we cannot have a fraction of a programmer, we round up the number of programmers to the nearest whole number:

Minimum number of programmers ≈ 6

Therefore, the minimum number of programmers required to complete the project within the deadline is 6.

6. A software project has 10 input fields, 8 output fields, and 5 inquiry fields. The complexity of each field is moderate. Calculate the total functional points.

7.A software project has 3 external inputs, 4 external outputs, and 2 external inquiries. The complexity of each input is high, the complexity of each output is low, and the complexity of each inquiry is average. Calculate the total functional points.

8.A software project has 6 external inputs, 5 external outputs, and 3 external inquiries. The complexity of each input is low, the complexity of each output is high, and the complexity of each inquiry is low. Calculate the total functional points.

9.A software project has 2 external inputs, 3 external outputs, and 4 external inquiries. The complexity of each input is low, the complexity of each output is average, and the complexity of each inquiry is high. Calculate the total functional points.

10. A software project has 8 external inputs, 6 external outputs, a nd 5 external inquiries. The complexity of each input is high, the complexity of each output is high, and the complexity of each inquiry is average. Calculate the total functional points.