In [1]:

```python
def cocomo_basic(mode, kloc):
 # Coefficients for different modes
    coefficients = {
    'organic': {'a': 2.4, 'b': 1.05, 'c': 2.5, 'd': 0.38},
    'semi-detached': {'a': 3.0, 'b': 1.12, 'c': 2.5, 'd': 0.35},
    'embedded': {'a': 3.6, 'b': 1.20, 'c': 2.5, 'd': 0.32}
    }

    if mode not in coefficients:
        raise ValueError("Invalid mode! Choose from 'organic', 'semi-detac

    a = coefficients[mode]['a']
    b = coefficients[mode]['b']
    c = coefficients[mode]['c']
    d = coefficients[mode]['d']

    # Effort in person-months
    effort = a * (kloc ** b)

    # Time to develop in months
    time = c * (effort ** d)

    # Number of developers required
    developers = effort / time
    return effort, time, developers

def main():
    mode = input("Enter the development mode (organic, semi-detached, embe
    kloc = float(input("Enter the size of the project in KLOC (thousands o
    effort, time, developers = cocomo_basic(mode, kloc)

    print(f"\nCOCOMO Model Results for {kloc} KLOC in {mode.capitalize()}
    print(f"Effort required: {effort:.2f} person-months")
    print(f"Development time: {time:.2f} months")
    print(f"Number of developers: {developers:.2f}")

if __name__ == "__main__":
    main()

```

```
Enter the development mode (organic, semi-detached, embedded): organic
Enter the size of the project in KLOC (thousands of lines of code): 8

COCOMO Model Results for 8.0 KLOC in Organic mode:
Effort required: 21.30 person-months
Development time: 7.99 months
Number of developers: 2.67
```

In [ ]:

```python

```