

AP COMPUTER SCIENCE A – THE if – else if – else STATEMENT – CLASS WORK

Write a class `Quintile` which does the following:

- 1) Takes in an integer `i` from `arg[0]` which satisfies $1 \leq i \leq 100$. Do this by
 - a) Ensuring that `Quintile` is invoked with one argument. If not, the code should print out something like
Usage:
`java Quintile inputInt`
and return.
 - b) Use `Integer.parseInt()` to parse `arg[0]`. If `arg[0]` does not represent a valid `int`, the code should catch the `NumberFormatException` and print out something like
`inputInt does not represent a valid int`
and return.
 - c) Test if `i` satisfies $1 \leq i \leq 100$. If not, the code should print out something like
`i must satisfy 1 <= i <= 100`
and return.
- 2) Use if – else if – else to calculate the quintile of `i`, which is defined by
$$\begin{aligned} 1 \leq i \leq 20 &\rightarrow \text{quintile} = 1 \\ 21 \leq i \leq 40 &\rightarrow \text{quintile} = 2 \\ 41 \leq i \leq 60 &\rightarrow \text{quintile} = 3 \\ 61 \leq i \leq 80 &\rightarrow \text{quintile} = 4 \\ 81 \leq i \leq 100 &\rightarrow \text{quintile} = 5 \end{aligned}$$
The code should print out something like
`i = 48`
`quintile = 3`