

## Use Existing Knowledge to Learn Java

- Using body mass index (BMI)
- Problem Statement
  - Given a weight and height value entered by a user, compute and display the BMI.



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Slide 1

## Describe Python Program

- Have students write a description of what BMI\_1\_Main\_only.py does.
  - Do in pairs.
  - (Instructor gives no direction about level of detail to include in their description.)
- Pick a few descriptions and discuss each.
  - Different perspectives?



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Slide 2

## Compare Python with Java

- Use
  - BMI\_1\_Main\_only.py
  - BMI\_1\_Main\_only.java
- Do in pairs
- Goal
  - Find as many differences as you can between these two programs.



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Slide 3

## Compare Python with Java

- while more\_differences:
  - Advance to next pair
  - Have this pair identify one difference
- Any differences not identified?
- Briefly describe Java code
  - Use appropriate terminology



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Slide 4

## Describe Python Program

- Have students write a description of what `BMI_2_Functions.py` does.
  - Do in pairs.
  - (Instructor gives no direction about level of detail to include in their description.)
- Pick a few descriptions and discuss each.
  - Different perspectives?



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Slide 5

## Compare Python with Java

- Have students compare:
  - `BMI_2_Functions.py`
  - `BMI_2_Functions.java`
- Do in pairs
- Goal
  - Find as many differences as you can between these two programs.



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Slide 6

## Compare Python with Java

- while more\_differences:
  - Advance to next pair
  - Have this pair identify one difference
- Any differences not identified?
- Briefly describe Java code
  - Use appropriate terminology



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Slide 7

## Compare Java with Java

- Introduce jGRASP
- Differences between?
  - BMI\_2\_Functions.java
  - BMI\_2\_Functions\_Alt1.java
  - Which is better? Why?
- Differences between?
  - BMI\_2\_Functions.java
  - BMI\_2\_Functions\_Alt2.java
  - Which is better? Why?



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Slide 8

## Textbook

- Covered most of chapter 2 (Java basics)
- Covered most of chapter 3 (selection)
- Covered 4.2 (common math functions)
- Covered 5.2 (while)
- Covered 6.2 (defining a method)
- Covered 6.3 (calling a method)
- Covered 6.5 (passing arguments)
- Covered 9.6 (using classes from Java API)
- Covered 12.1 & 12.2 (exception handling)

