

## **James King**

-For the Alternative Language project I decided to use Java because I felt it was the most useful language to learn on the list.

-I used no libraries in my code

### **Object-oriented programming**

Java runs off of OOP and you really cannot program and use Java without a little bit of OOP knowledge.

### **File ingestion**

File ingestion in Java involves the process of reading data from files into a Java program for further processing or analysis, utilizing methods such as FileInputStream, BufferedReader, Scanner, or Apache Commons IO depending on the specific requirements and characteristics of the file.

### **Conditional statements**

Java has if/else statements and switch statements that programmers can use to program with.

### **Assignment statements**

In Java, assignment operators such as "=", "+=", "-=", "\*=", "/=", and "%=" are used to respectively assign, add to, subtract from, multiply by, divide by, and find the remainder of a variable's value based on expressions involving the variable and other operands.

### **Loops**

Loops in Java, such as "for", "while", and "do-while", enable repetitive execution of a block of code until a certain condition is met, providing flexibility for iterating over arrays, collections, or executing code a fixed number of times.

### **Subprograms (functions/methods)**

Subprograms, also known as functions or methods in Java, encapsulate a block of code that performs a specific task and can be invoked multiple times throughout a program, promoting code reusability, modularization, and abstraction of complex logic.

### **Unit testing**

Unit testing in Java, exemplified by JUnit or TestNG, involves writing test cases to verify the behavior of individual methods or classes, ensuring their functionality in isolation.

### **Exception handling**

Exception handling in Java allows developers to gracefully manage runtime errors by using try-catch blocks to handle exceptional conditions, preventing program termination and promoting robustness.

What company (oem) has the highest average weight of the phone body? Lenovo

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CSV file processed successfully.
Company with the highest average weight: Lenovo
Phones announced in one year and released in another:
OEM: Benefon, Model: Vega, Announced: 1999, Released: Discontinued
OEM: Haier, Model: V280, Announced: 2005, Released: Discontinued
OEM: Haier, Model: V190, Announced: 2004, Released: Discontinued
OEM: Haier, Model: V100, Announced: 2004, Released: Discontinued
OEM: Haier, Model: P5, Announced: 2003, Released: Discontinued
OEM: Haier, Model: Z8000, Announced: 2004, Released: Discontinued
OEM: Kyocera, Model: TG 200, Announced: 2000, Released: Discontinued
OEM: Lenovo, Model: Yoga Tab 3 10, Announced: 2016, Released: Available. Released 2016
OEM: LG, Model: B2150, Announced: 2005, Released: Discontinued
OEM: LG, Model: LG-600, Announced: 2002, Released: Discontinued
OEM: LG, Model: LG-500, Announced: 2002, Released: Discontinued
OEM: Maxon, Model: MX-C90, Announced: 2003, Released: Discontinued
OEM: Maxon, Model: MX-A30, Announced: 2004, Released: Discontinued
OEM: Maxon, Model: MX-C60, Announced: 2003, Released: Discontinued
OEM: Maxon, Model: MX-C20, Announced: 2003, Released: Discontinued
OEM: Maxon, Model: MX-C110, Announced: 2004, Released: Discontinued
OEM: Maxon, Model: MX-E10, Announced: 2003, Released: Discontinued
OEM: Maxon, Model: MX-V10, Announced: 2004, Released: Discontinued
OEM: Maxon, Model: MX-V30, Announced: 2004, Released: Discontinued
OEM: Maxon, Model: MX-7990, Announced: 2003, Released: Discontinued
OEM: Maxon, Model: MX-E80, Announced: 2004, Released: Cancelled
OEM: Maxon, Model: MX-7750, Announced: 2004, Released: Discontinued
OEM: Maxon, Model: MX-C11, Announced: 2004, Released: Discontinued
OEM: Maxon, Model: MX-C160, Announced: 2004, Released: Discontinued
OEM: Maxon, Model: MX-7940, Announced: 2003, Released: Discontinued
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OEM: Motorola, Model: C336, Announced: 2002, Released: Discontinued  
OEM: Motorola, Model: C332, Announced: 2002, Released: Discontinued  
OEM: Motorola, Model: C331, Announced: 2002, Released: Discontinued  
OEM: Motorola, Model: Accompli 388, Announced: 2002, Released: Discontinued  
OEM: Motorola, Model: Accompli 008, Announced: 2002, Released: Discontinued  
OEM: Motorola, Model: Timeport 280, Announced: 2001, Released: Discontinued  
OEM: Motorola, Model: V.box(V100), Announced: 2000, Released: Discontinued  
OEM: Motorola, Model: StarTAC 130, Announced: 1998, Released: Discontinued  
OEM: Motorola, Model: StarTAC 85, Announced: 1997, Released: Discontinued  
OEM: Motorola, Model: StarTAC Rainbow, Announced: 1997, Released: Discontinued  
OEM: Motorola, Model: StarTAC 75+, Announced: 1997, Released: Discontinued  
OEM: Motorola, Model: StarTAC 75, Announced: 1997, Released: Discontinued  
OEM: Motorola, Model: SlimLite, Announced: 1997, Released: Discontinued  
OEM: Motorola, Model: cd930, Announced: 1998, Released: Discontinued  
OEM: Motorola, Model: cd920, Announced: 1998, Released: Discontinued  
OEM: Motorola, Model: M3188, Announced: 1999, Released: Discontinued  
OEM: Motorola, Model: M3288, Announced: 1999, Released: Discontinued  
OEM: Motorola, Model: M3588, Announced: 1999, Released: Discontinued  
OEM: Motorola, Model: M3688, Announced: 1999, Released: Discontinued  
OEM: Motorola, Model: M3788, Announced: 1999, Released: Discontinued  
OEM: Motorola, Model: M3888, Announced: 1999, Released: Discontinued  
OEM: NEC, Model: DB4100, Announced: 2000, Released: Discontinued  
OEM: NEC, Model: G9D+, Announced: 1997, Released: Discontinued  
OEM: O2, Model: XDA II, Announced: 2003, Released: Discontinued  
OEM: O2, Model: Xphone, Announced: 2003, Released: Discontinued  
OEM: O2, Model: XDA, Announced: 2003, Released: Discontinued  
OEM: Panasonic, Model: GD67, Announced: 2002, Released: Discontinued  
OEM: Panasonic, Model: GD75, Announced: 2001, Released: Discontinued  
OEM: Panasonic, Model: GD35, Announced: 2001, Released: Discontinued  
OEM: Panasonic, Model: GD93, Announced: 2000, Released: Discontinued

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS    POSTMAN CONSOLE    COMMENTS

OEM: Sagem, Model: MY X-5, Announced: 2002, Released: Discontinued  
OEM: Sagem, Model: MY 3078, Announced: 2002, Released: Discontinued  
OEM: Sagem, Model: MW 3026, Announced: 2001, Released: Discontinued  
OEM: Sagem, Model: MW 3052, Announced: 2001, Released: Discontinued  
OEM: Sagem, Model: MW 3042, Announced: 2001, Released: Discontinued  
OEM: Sagem, Model: MW 3040, Announced: 2001, Released: Discontinued  
OEM: Sagem, Model: MW X1, Announced: 2001, Released: Discontinued  
OEM: Sagem, Model: WA 3050, Announced: 2001, Released: Discontinued  
OEM: Sagem, Model: MW 3020, Announced: 2001, Released: Discontinued  
OEM: Sagem, Model: MC 3000, Announced: 2001, Released: Discontinued  
OEM: Sagem, Model: MC 939 WAP, Announced: 2000, Released: Discontinued  
OEM: Sagem, Model: MC 936, Announced: 2000, Released: Discontinued  
OEM: Sagem, Model: MC 950, Announced: 2000, Released: Discontinued  
OEM: Sagem, Model: MC 959, Announced: 2000, Released: Discontinued  
OEM: Sagem, Model: MC 940, Announced: 2000, Released: Discontinued  
OEM: Sagem, Model: MC 932, Announced: 1999, Released: Discontinued  
OEM: Sagem, Model: RC 922, Announced: 1999, Released: Discontinued  
OEM: Sagem, Model: MC 912, Announced: 1999, Released: Discontinued  
OEM: Sagem, Model: MC 850, Announced: 1998, Released: Discontinued  
OEM: Sagem, Model: MC 825 FM, Announced: 1998, Released: Discontinued  
OEM: Sagem, Model: MC 820, Announced: 1998, Released: Discontinued  
OEM: Sagem, Model: RC 750, Announced: 1998, Released: Discontinued  
OEM: Sagem, Model: RC 730, Announced: 1997, Released: Discontinued  
OEM: Samsung, Model: Q300, Announced: 2002, Released: Discontinued  
OEM: Samsung, Model: Q200, Announced: 2002, Released: Discontinued  
OEM: Samsung, Model: Q100, Announced: 2001, Released: Discontinued  
OEM: Samsung, Model: SGH-250, Announced: 1996, Released: Discontinued  
OEM: Siemens, Model: S55, Announced: 2002, Released: Discontinued  
OEM: Siemens, Model: SX45, Announced: 2001, Released: Discontinued  
OEM: Siemens, Model: SL45i, Announced: 2001, Released: Discontinued  
OEM: Siemens, Model: SL42, Announced: 2001, Released: Discontinued  
OEM: Siemens, Model: SL45, Announced: 2000, Released: Discontinued  
OEM: Siemens, Model: A36, Announced: 2000, Released: Discontinued  
OEM: Siemens, Model: M30, Announced: 2000, Released: Discontinued  
OEM: Siemens, Model: C28, Announced: 2000, Released: Discontinued  
OEM: Sony, Model: CMD J6, Announced: 2001, Released: Discontinued  
OEM: Sony, Model: CMD Z1 plus, Announced: 1997, Released: Discontinued  
OEM: Sony, Model: CMD Z1, Announced: 1997, Released: Discontinued  
OEM: Sony, Model: CM-DX 2000, Announced: 1997, Released: Discontinued  
OEM: Sony, Model: CM-DX 1000, Announced: 1997, Released: Discontinued  
OEM: Tel.Me., Model: T918, Announced: 2003, Released: Discontinued  
OEM: Tel.Me., Model: T919i, Announced: 2003, Released: Discontinued  
OEM: Tel.Me., Model: T919, Announced: 2003, Released: Discontinued  
OEM: Telit, Model: G82, Announced: 2002, Released: Discontinued  
OEM: Telit, Model: GM 882, Announced: 2002, Released: Discontinued  
OEM: Telit, Model: GM 810, Announced: 1999, Released: Discontinued  
OEM: Telit, Model: Estremo, Announced: 1999, Released: Discontinued  
OEM: Telit, Model: GM 710, Announced: 1999, Released: Discontinued  
OEM: Wiko, Model: Sunny2 Plus, Announced: 2017, Released: Available. Released 2017  
OEM: Wiko, Model: Sunny2, Announced: 2017, Released: Available. Released 2017

OEM: Tel.Me., Model: T918, Announced: 2003, Released: Discontinued  
OEM: Tel.Me., Model: T919i, Announced: 2003, Released: Discontinued  
OEM: Tel.Me., Model: T919, Announced: 2003, Released: Discontinued  
OEM: Telit, Model: G82, Announced: 2002, Released: Discontinued  
OEM: Telit, Model: GM 882, Announced: 2002, Released: Discontinued  
OEM: Telit, Model: GM 810, Announced: 1999, Released: Discontinued  
OEM: Telit, Model: Estremo, Announced: 1999, Released: Discontinued  
OEM: Telit, Model: GM 710, Announced: 1999, Released: Discontinued  
OEM: Wiko, Model: Sunny2 Plus, Announced: 2017, Released: Available. Released 2017  
OEM: Wiko, Model: Sunny2, Announced: 2017, Released: Available. Released 2017  
OEM: Wiko, Model: Sunny Max, Announced: 2016, Released: Available. Released 2016  
OEM: ZTE, Model: Blade Max View, Announced: 2019, Released: Available. Released 2019  
OEM: Benefon, Model: Vega, Announced: 1999, Released: Discontinued  
OEM: Haier, Model: V280, Announced: 2005, Released: Discontinued  
OEM: Haier, Model: V190, Announced: 2004, Released: Discontinued  
OEM: Haier, Model: V100, Announced: 2004, Released: Discontinued  
OEM: Haier, Model: P5, Announced: 2003, Released: Discontinued  
OEM: Haier, Model: Z8000, Announced: 2004, Released: Discontinued  
Phones with only one feature sensor: 1000  
Year with the most phones launched after 1999: 2003