Introduction to OOPs

"Overview and basic OOPs concepts" Fundamentals of OOPs

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Agenda

Object Oriented Approach

Questions and Discussion





Why so many languages?

Language evolution, innovation and development occurs for two fundamental reasons:

- To adapt to changing environments and uses
- To implement refinements and improvements in the art of programming





Why Object Oriented Programming?

Limitations in earlier approaches (Procedural/Structure programming)

- List of instructions (no other organizing paradigm) procedural languages
- Signs of strain for large and more complex programs structure programming
 - Unrestricted access to global data by functions
 - Unrelated functions and data
 - Poor model of the real world
- Arrangement of separate data and functions can't model the real world problems





Real World Modeling

- Complex real world objects have both attributes and behavior
- Attributes: also called characteristics, real world objects have attributes like, speed, color, model for cars, similarly job title, name, age, and address for a person etc. equivalent to data in a program.
- Behavior: something that a real-world object does in response to some stimulus, event, or action. E.g. The speed of a car increased with applying accelerator. The age of a person increase with the renewal of every year.





The Object-Oriented Approach

- Combining both data and the functions that operate on that data into a single unit
- Data in objects can be accessed and modified using functions, hence, object communicate with each others by calling each other's member functions
- Let's it take a real world scenario, and model it using Object Oriented Design (OOD).

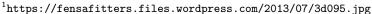




Your Turn: Time to hear from you!







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References



Object-Oriented Programming in C++, 4th Edition . 2002.



