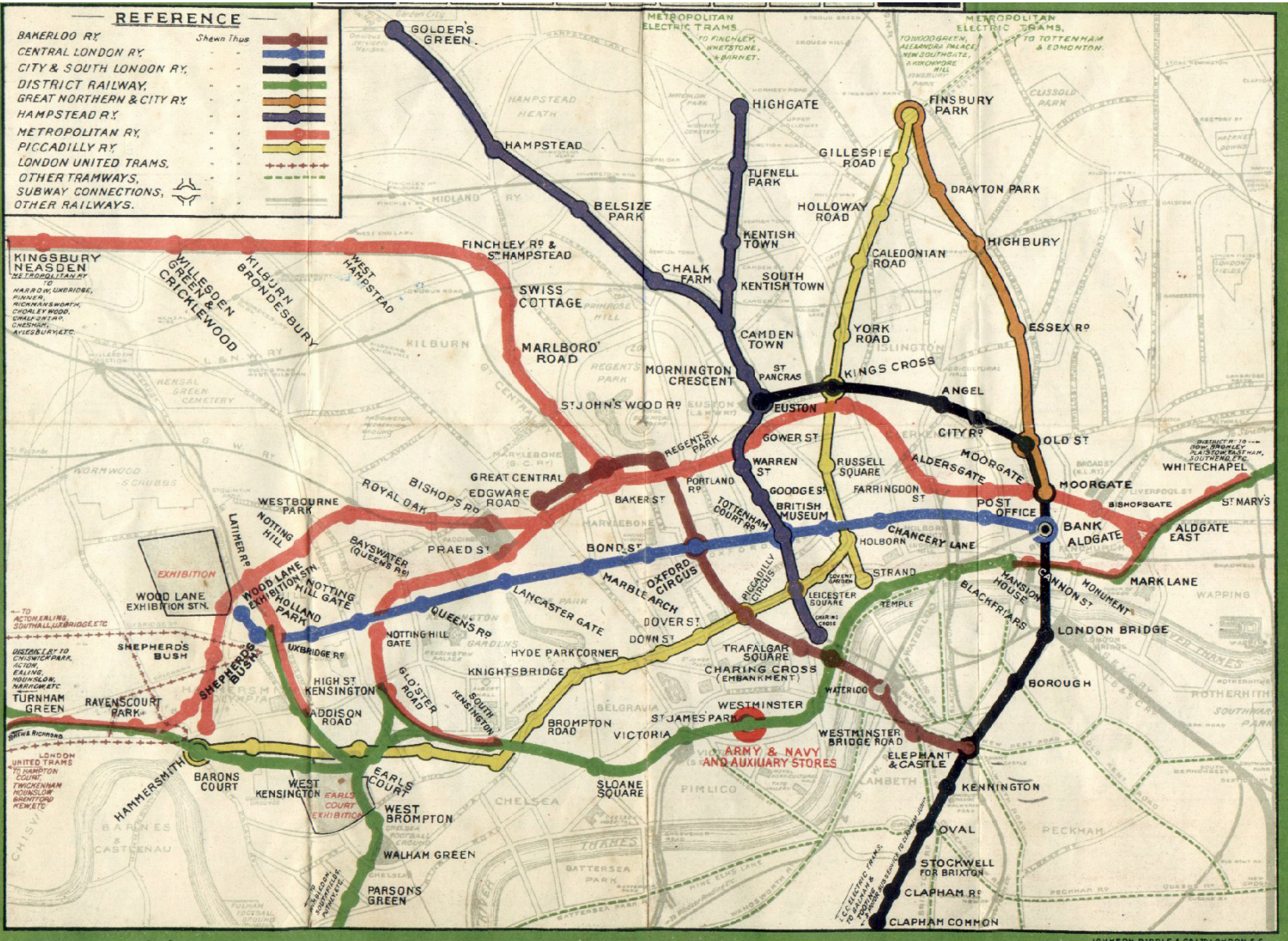


Objects

REFERENCE

- BAKERLOO RY. —●— Shewn Thus
- CENTRAL LONDON RY. —●—
- CITY & SOUTH LONDON RY. —●—
- DISTRICT RAILWAY. —●—
- GREAT NORTHERN & CITY RY. —●—
- HAMPSTEAD RY. —●—
- METROPOLITAN RY. —●—
- PICCADILLY RY. —●—
- LONDON UNITED TRAMS. —●—
- OTHER TRAMWAYS, SUBWAY CONNECTIONS, OTHER RAILWAYS. - - - - -





Abstraction

- Abstraction is the process of capturing only those ideas about a concept that are relevant to the current situation.

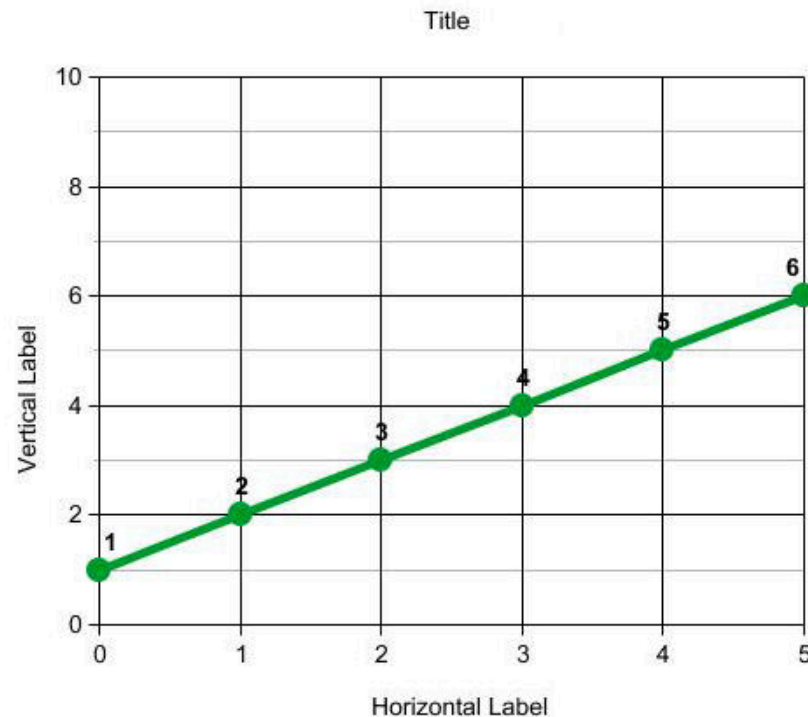


Abstraction

- ***Control abstraction***: Giving function names to sections of code that then "stand" for that code.
- When we call a function, we don't care how the function works, we just care that it does work.
 - We have captured the meaning of a section of code by giving it a name, while giving the caller of the function the ability to ignore how it works.

Abstraction

- ***Data abstraction***: Choosing to represent a concept by certain features and ignoring others.
- So far, we can use structs for this.



Classes

- Classes = Structs + Functions
- A class is a struct with some functions associated with it that act upon that struct.
- The point of a class is to combine data abstractions (a struct) with appropriate control abstractions (functions), resulting in one entity that has ***state*** (variables) and associated ***behaviors*** (functions).

Design a class



Designing a class

- Classes are declared like structs, but have public and private sections.
- Anything in the public section is accessible by a programmer *using* the class.
- Anything in the private section is accessible only by the programmer *writing* the class.
- (More about this later.)