Section 19 : Template Functions and Classes

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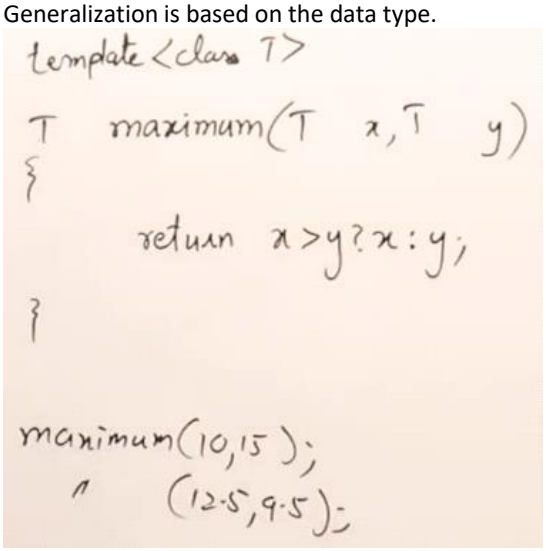
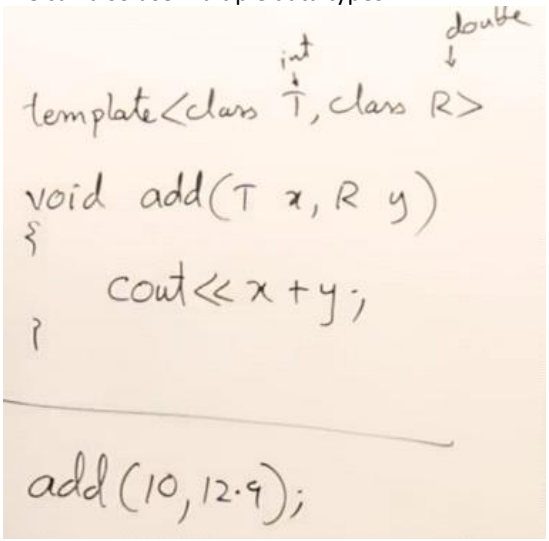
Section 19 : Template Functions and Classes

Templates :

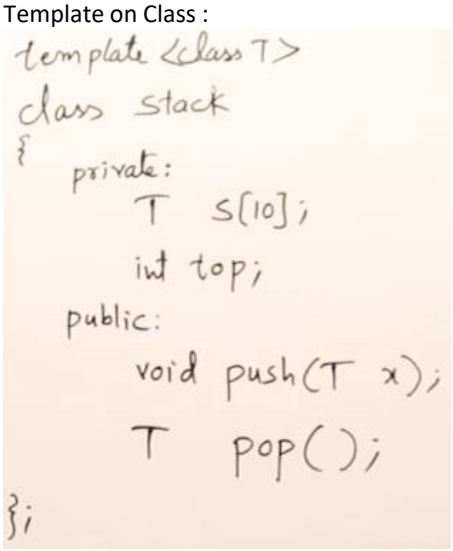
- Templates are used for generic programming.
- Generalization is based on the data type.



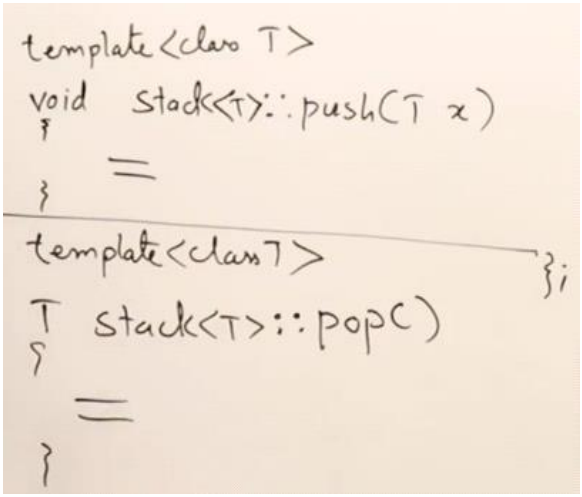
- We can also use multiple data types.



- Template on Class :



- Functions of Class Stack :



- For class we have to write template. For every function, when we are implementing outside using scope resolution, we must use a template.
- For creating object of class stack, we need to mention the data type :
  - Stack<int> s;
  - Stack<float> s2;
- Whenever a new body start {…}, We have to mention that template again.
  - Template<class T>
- Whenever we use class name, we have to write <T>.
  - void Stack<T>::push(T x) {…}
- Template is a very powerful feature for the collection framework.

- **Template parameter** : It can be used to pass a type as argument.
- Both class & typename keyword can be used in template.
- Validity of template parameters is inside that block only.