Lecture Qt006
Memory

Instructor: David J. Coe

CPE 353 – Software Design and Engineering

Department of Electrical and Computer Engineering

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Outline

- Hands-On Exercise:

  Modifying EchoDialog with QtCreator
- C++ Memory Management
- Key Points

Hands-On Exercise: Modifying Echo Dialog with QtCreator

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

- Using the notes above, recreate the Echo Dialog class using **qtcreator**

- Once Echo Dialog is running correctly, add a blank "help" dialog that appears when a **Help** button is pressed
  - Add the Help button to the form – you may have to temporarily break layouts to do this
  - In the ***Dialog*** constructor, create a blank help dialog object such as

    QDialog hd;
  - Hide the object **hd** from view

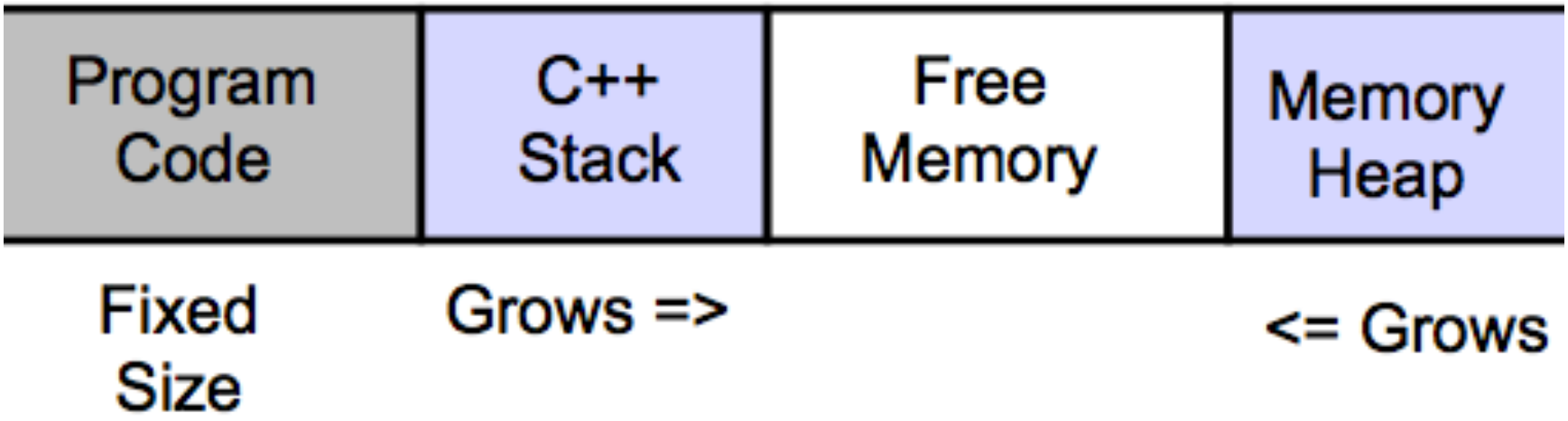
    hd.hide();
  - Write a **connect** statement which links the ***clicked*** SIGNAL of the Help button to the **show** SLOT of the help dialog object **hd**

In-class Exercise: Modifying Echo Dialog with QtCreator

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

- Lessons learned
  - What was the result of these modifications?
  - How might one correct the problem?

C++ Memory Management



Activation Record

- A record used at run time to store information about a function call, including the parameters, local variables, register values, and return address

  Also called a ***stack frame***

Run-time Stack

- Data structure used to keep track of activation records during the execution of a program

Key Points

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

- The scope of identifiers impacts the ability of users to see and interact with widgets allocated in a static fashion
- Dynamic allocation allows widgets to persist outside the scope of the code that created them
  - This can be used to allow users a chance to see and interact with the widgets
  - It may also create a memory leak situation