



Summer University 2006

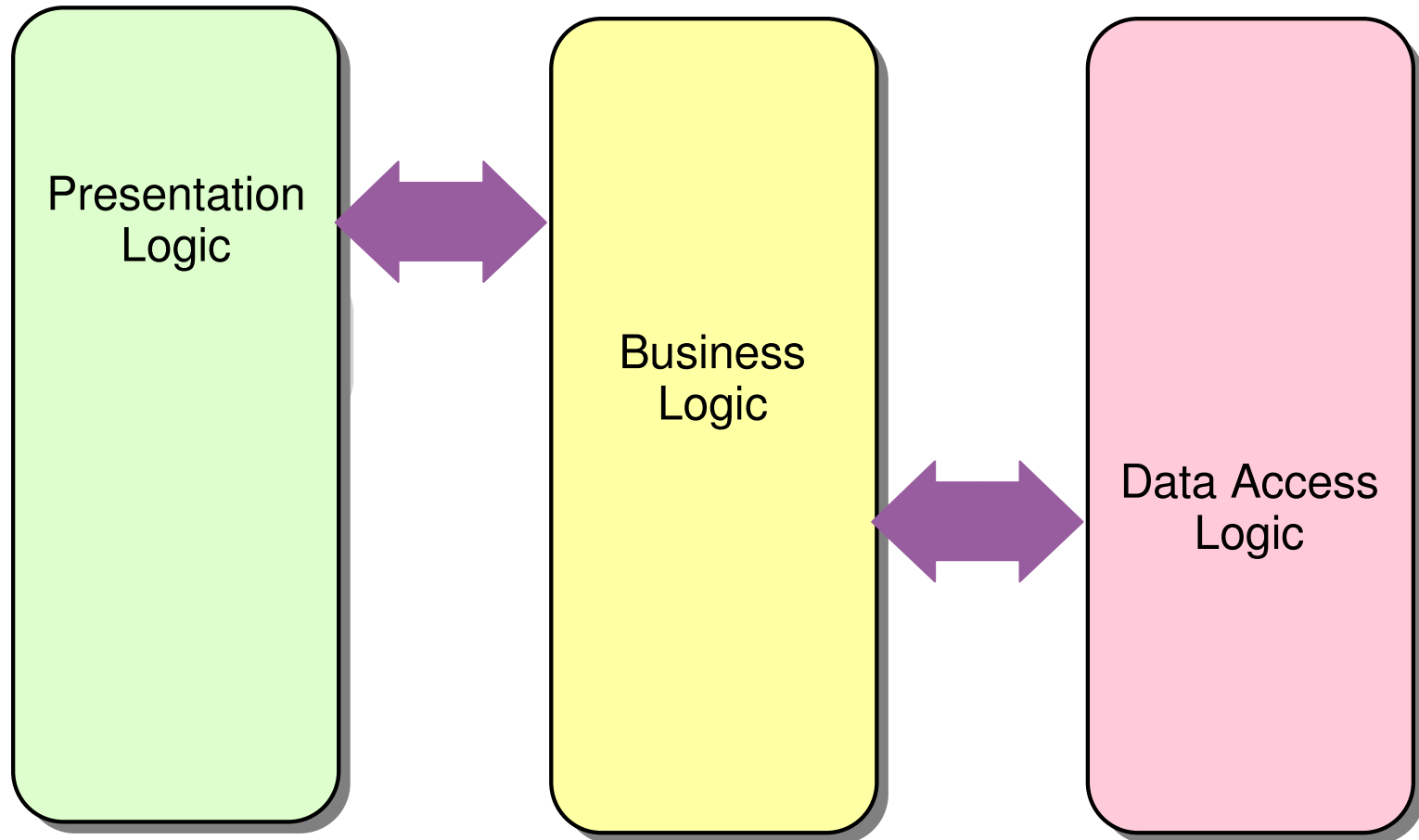
CICS Applications

Design and Programming

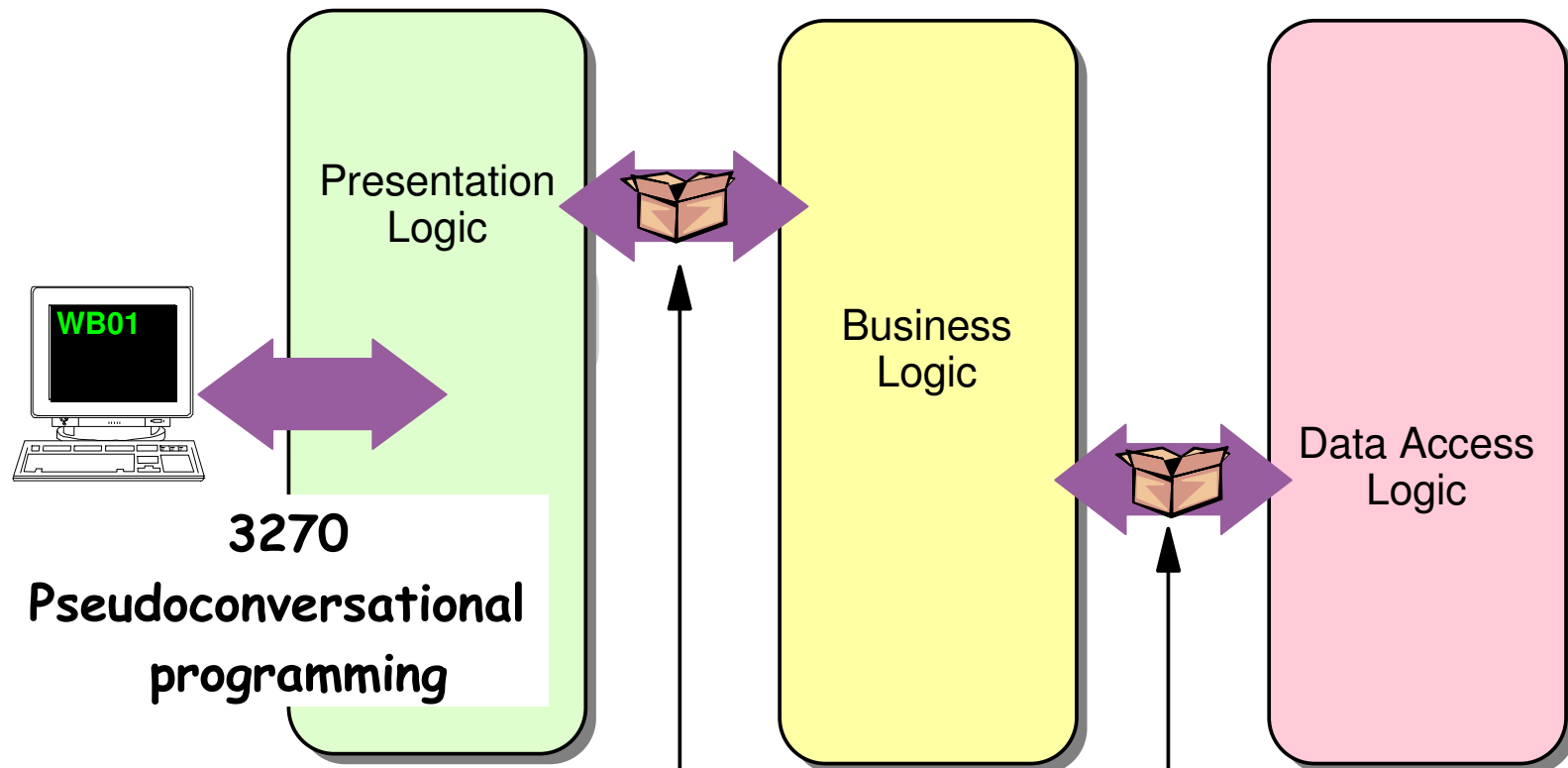
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Three Tier Application Design

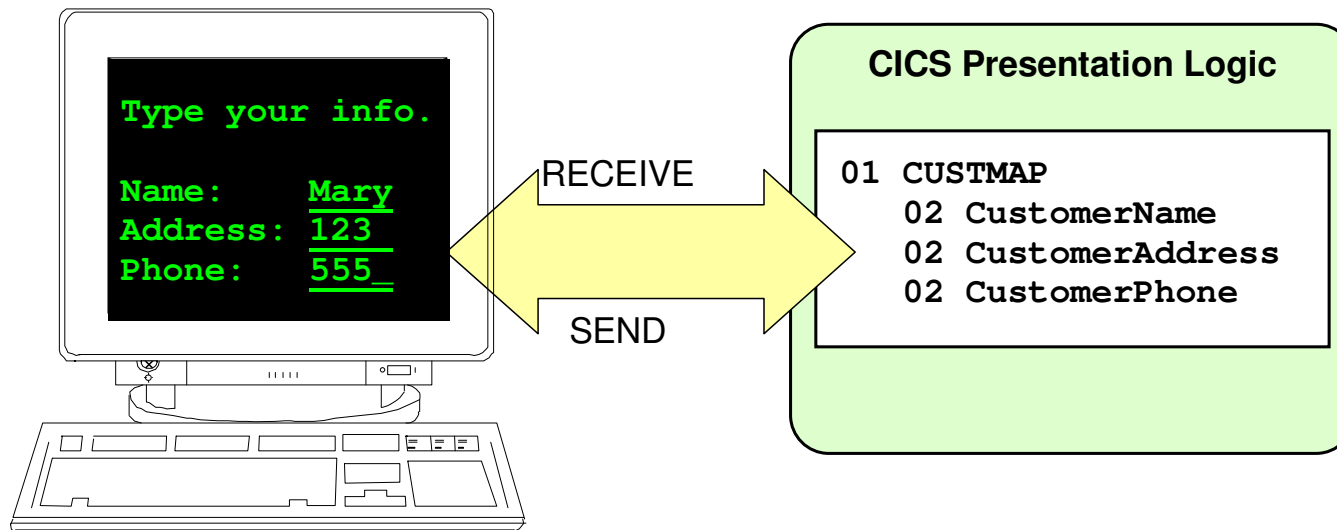


CICS Essential Design concepts

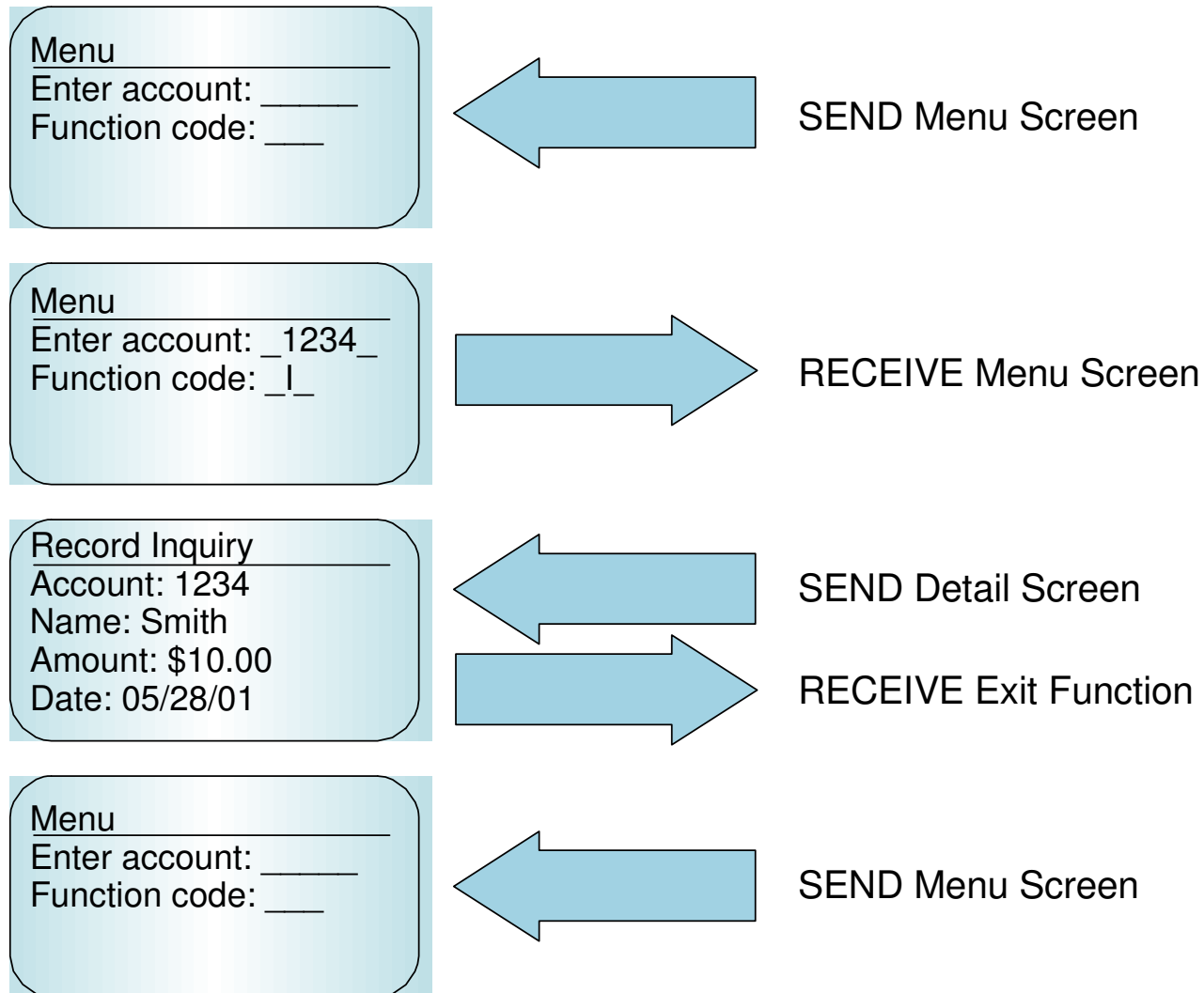


COMMAREA or CHANNEL
+
Program to Program communication

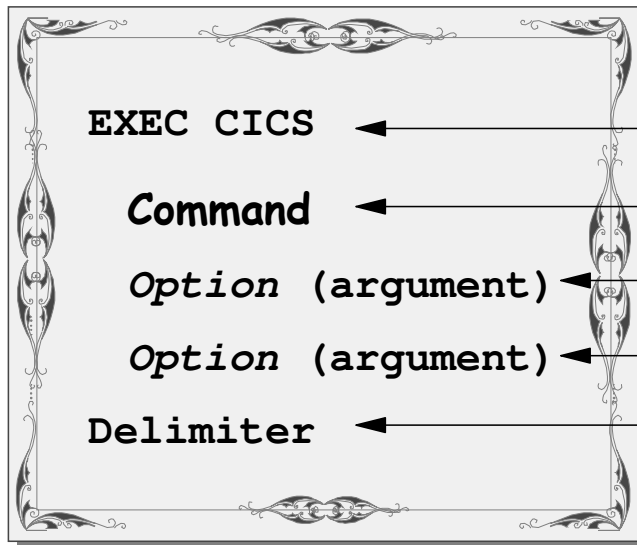
Basic Mapping Support



Dialog Design Overview



CICS Command Syntax



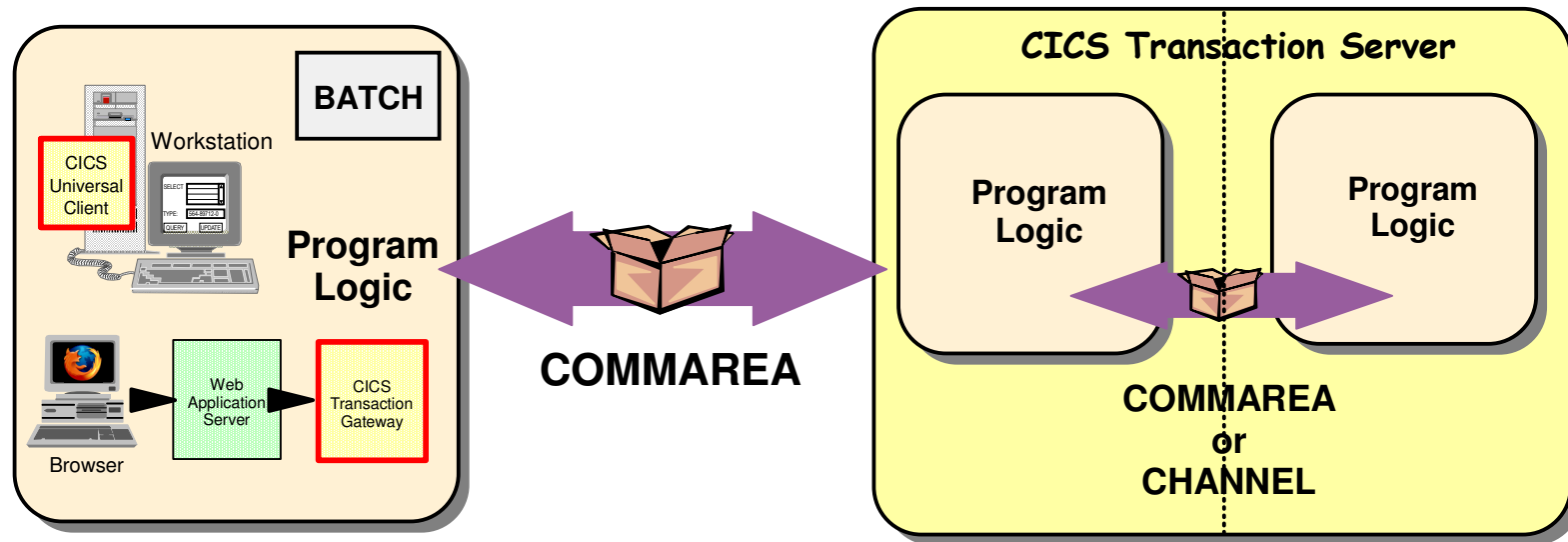
- Here comes a command
- What you want CICS to do
- How CICS should do it
- Language-dependent

```
EXEC CICS  
READ  
FILE ('CLIENTS')  
INTO (CLNT-REC-AREA)  
RIDFLD (CLNT-NUMBER)  
UPDATE  
END-EXEC
```

Different in Java:
Uses JCICS classes
→ Object oriented
approach

```
import com.ibm.cics.server.ESDS;  
import com.ibm.cics.server.RecordHolder;  
  
...  
ESDS acctfile = new ESDS();  
acctfile.setName("ACCTFILE");  
RecordHolder record = new RecordHolder();  
acctfile.read(1, record);
```

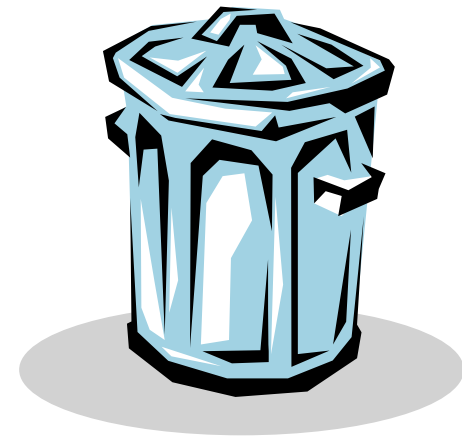
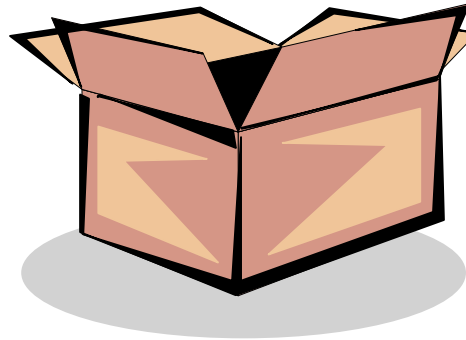
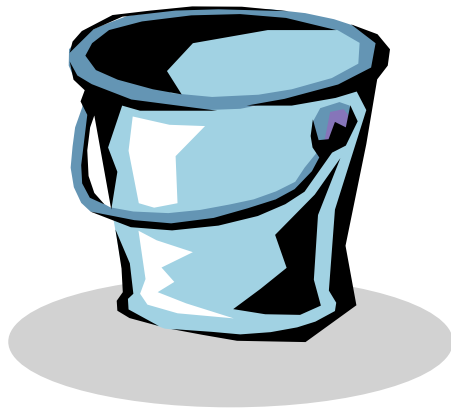
CICS Program-to-Program Communication



CICS supplied P2P COMMAREA based functions:

- EXEC CICS LINK (CICS to CICS, can be remote)
- EXEC CICS XCTL (CICS to CICS)
- ECI call (CICS Universal Client to CICS)
- ECI call (CICS Transaction Gateway to CICS)
- EXCI (z/OS Batch to CICS)

The Commarea



- A container that holds data
 - ✓ maximum length is 32Kb
- Passed from one program to another
 - ✓ same task or not
 - ✓ same COMMAREA for the request and the reply (if any)
- Empty, partially filled, or full

Link with Commarea

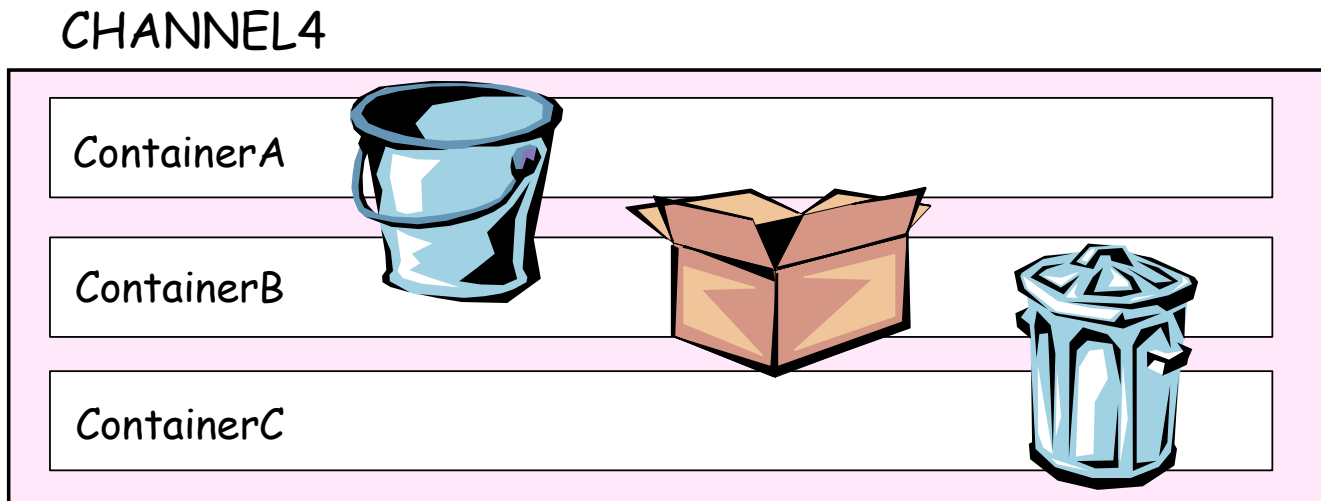
```
MOVE "HUGO" TO MYCOMMAREA  
EXEC CICS LINK PROGRAM("HELLOPRO")  
      COMMAREA(MYCOMMAREA)  
END-EXEC
```

```
String commarea = "HUGO" ;  
Program hello = new Program();  
hello.setName("HELLOPRO" );  
hello.link(commarea.getBytes());
```

"HUGO"

Program
HELLOPRO

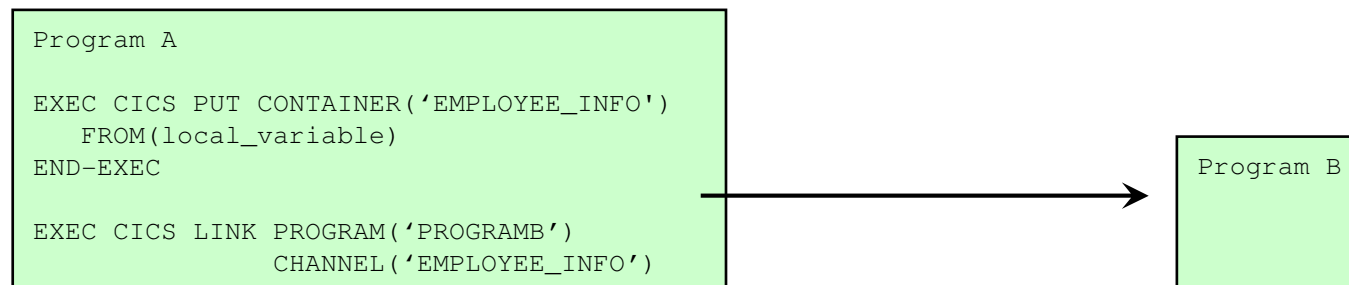
Channels & Containers



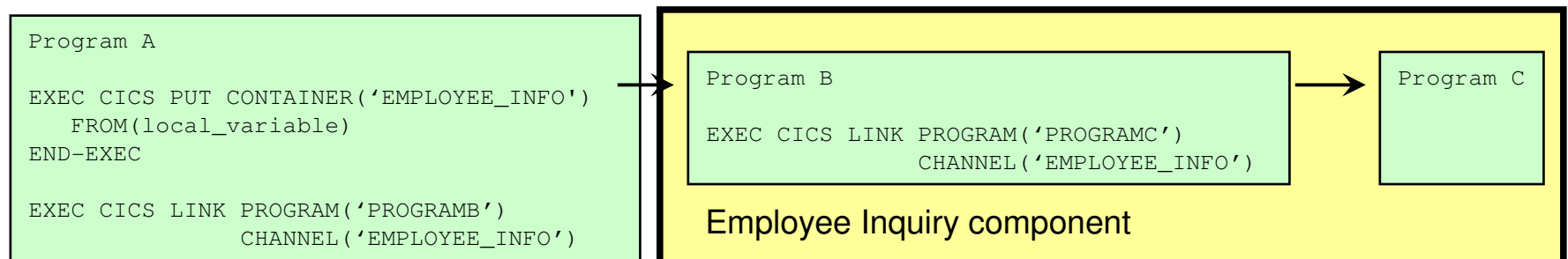
- A NAMED group of NAMED CONTAINERS
 - ✓ CONTAINER can be seen as a named COMMAREA
 - ✓ CONTAINER is not limited in size
 - ✓ no limit on the number of CONTAINERS in a CHANNEL
 - ✓ data conversion at CONTAINER level
 - ✓ CONTAINERS address complex message structure issues
- Passed from one program to another
- Empty or not

Link with Channel

- One program / One channel



- One channel / Multiple programs
 - ✓ The Channel is the interface to a Component



Program Preparation Process

