#### Object Oriented Systems Analysis and Design Using UML Simon Bennett, Steve McRobb and Ray Farmer

# Object Interaction – Sequence Diagrams

Based on Chapter 9
Bennett, McRobb and Farmer

Object Oriented Systems Analysis
and Design Using UML

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#### In This Lecture You Will Learn:

how to model object interaction using an interaction communication diagram.



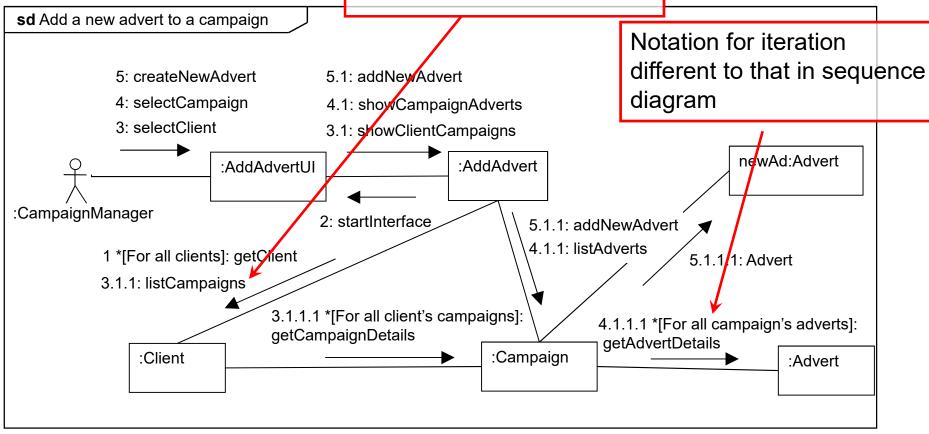
## **Communication Diagrams**

- Hold the same information as sequence diagrams.
- Show links between objects that participate in the collaboration.
- No time dimension, sequence is captured with sequence numbers.
- Sequence numbers are written in a nested style (for example, 3.1 and 3.1.1) to indicate the nesting of control within the interaction that is being modelled.



## Communication Diagrams

listCampaigns message may pass back too much data from : Campaign





## **Communication Diagrams**

listCampaigns message does not pass back any data from : Campaign in this alternative interaction sd Add a new advert to a campaign 5: createNewAdvert 5.1: addNewAdvert 4: selectCampaign 4.1: showCampaignAdverts 4.1.2 \*[For all campaign's adverts]: 3: selectClient 3.1: showClientCampaigns getAdvertDetails :AddAdvertUI :AddAdvert :Advert 5.1.1: addNewAdvert :CampaignManager 2: startInterface 4.1.1: listAdverts 3.1.2 \*[For all client's campaigns]: 1 \*[For all clients]: get@lient getCampaignDetails 3.1.1: listCampaigns 5.1.1.1: Advert :Client newAd:Advert :Campaign

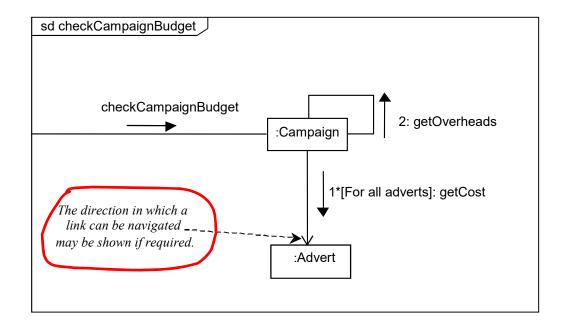


#### Message Labels

Type of message	Syntax example
Simple message.	4: addNewAdvert
Nested call with return value.  The return value is placed in the variable name.	3.1.2: name = getName
Conditional message.  This message is only sent if the condition  [balance > 0] is true.	5 [balance > 0]: debit(amount)
Iteration	4.1 *[For all adverts]: getCost



## **Navigating Links**





#### Summary

In this lecture you have learned about:

 how to model object interaction using an interaction communication diagram.



#### References

- UML Reference Manual (OMG, 2009)
- Bennett, Skelton and Lunn (2005)
   (For full bibliographic details, see Bennett, McRobb and Farmer)

