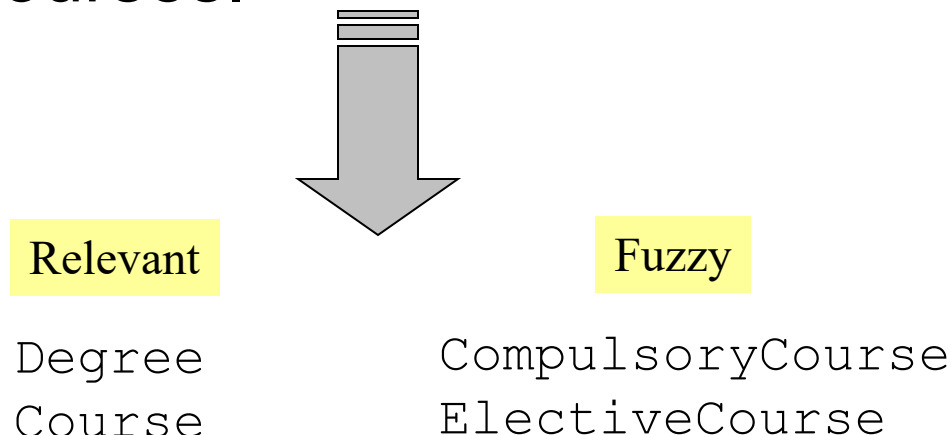# Example A.1 – University Enrolment

- Consider the following requirements for the University Enrolment system and identify the candidate classes:
  - Each university degree has a number of compulsory courses and a number of elective courses.

Relevant

Fuzzy

```
Degree
Course
```

```
CompulsoryCourse
ElectiveCourse
```

# Example A.1 – University Enrolment

- More requirements:

  – Each course is at a given level and has a credit-point value

  – A course can be part of any number of degrees

  – Each degree specifies minimum total credit points value required for degree completion

  – Students may combine course offerings into programs of study suited to their individual needs and leading to the degree in which enrolled

Example A.1– University Enrolment (solution)

Relevant classes	Fuzzy classes
Course	CompulsoryCourse
Degree	ElectiveCourse
Student	StudyProgram
CourseOffering	

Example B.1 – Video Store

- Consider the following requirements for the Video Store system and identify the candidate classes:

  – The video store keeps in stock an extensive library of current and popular movie titles. A particular movie may be held on video tapes or disks.

Relevant	Irrelevant
MovieTitle	VideoStore
VideoTape	Stock
VideoDisk	Library
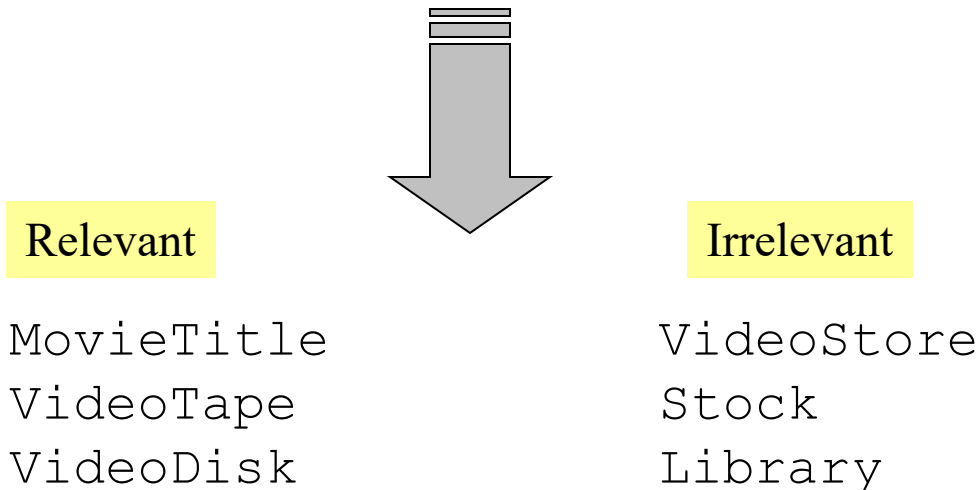
Example B.1 – Video Store

- More requirements:

  - Video tapes are in either "Beta" or "VHS" format

  - Video disks are in DVD format

  - Each movie has a particular rental period (expressed in days), with a rental charge to that period

  - The video store must be able to immediately answer any inquiries about a movie's stock availability and how many tapes and/or disks are available for rental

  - The current condition of each tape and disk must be known and recorded

Example B.1 – Video Store (solution)

Relevant classes	*Fuzzy classes*
MovieTitle	RentalConditions
VideoMedium	
VideoTape	
VideoDisk (or DVDDisk)	
BetaTape	
VHSTape	

Example C.1 – Contact Management

- Consider the following requirements for the Contact Management system and identify the candidate classes:

  - To "keep in touch" with current and prospective customer base

  - To store the names, phone numbers, postal and courier addresses, etc. of organizations and contact persons in these organizations

  - To schedule tasks and events for the employees with regard to relevant contact persons

  - Employees can schedule tasks and events for other employees or for themselves

  - A task is a group of events that take place to achieve a result (e.g. to solve customer's problem)

  - Typical types of events are: phone call, visit, sending a fax, arranging for training, etc.
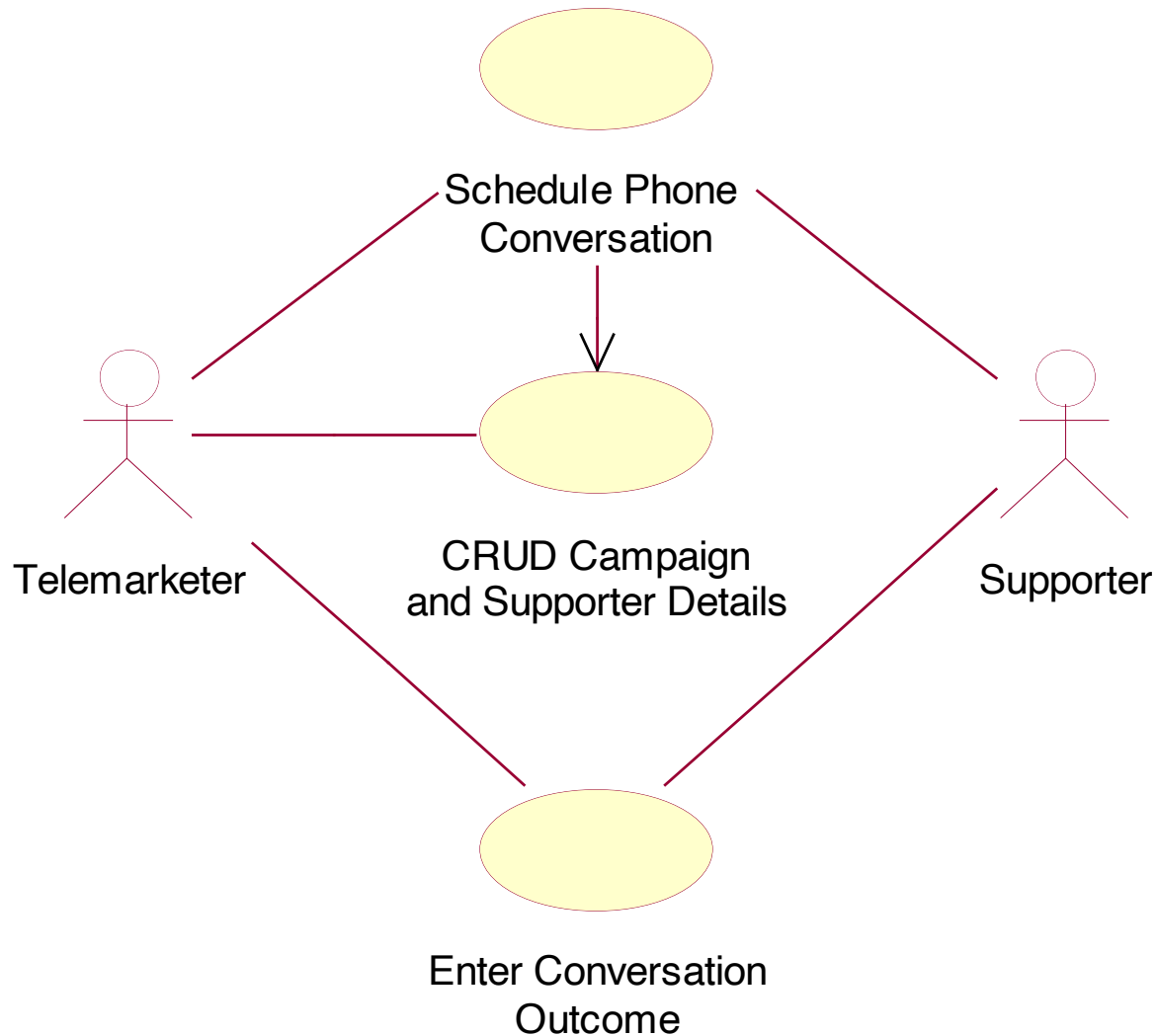
Example C.1 – Contact Management (solution)

Relevant classes	Fuzzy classes
Organization	CurrentOrg
Contact	ProspectiveOrg
Employee	PostalAddress
Task	CourierAddress
Event	

Example D.1 – Telemarketing
Business use case diagram

Schedule Phone Conversation

Telemarketer

CRUD Campaign and Supporter Details

Supporter

Enter Conversation Outcome

Example D.1 - Telemarketing

- Consider the following textual description for the Telemarketing system's use cases and identify the candidate classes:

    – The telemarketer requests the system that the phone call to a supporter be scheduled and dialed up

    – Upon successful connection, the telemarketer offers lottery tickets to the supporter. During a conversation, the telemarketer may need to access and modify both campaign and supporter details (*CRUD*, *create – read – update – delete*)

    – Finally, the telemarketer enters the conversation outcome, i.e. the successful or unsuccessful results of the telemarketing action

Example D.1 – Telemarketing (solution)

Campaign

CallScheduled

Supporter (from Use Case View)

CampaignTicket

CallOutcome

Telemarketer (from Use Case View)

Linee guida per la specifica delle classi

- **Nomi di classe**
  - Associare ad ogni classe un nome significativo nello specifico dominio applicativo
  - Adottare una convenzione standard per assegnare nomi alle classi, ad esempio:

    nome singolare, parole multiple devono essere congiunte, con l'iniziale di ciascuna parola in carattere maiuscolo (es. `PostalAddress`)

  - Definire una lunghezza massima per i nomi delle classi (non più di 30 caratteri)

- **Attributi e operazioni**
  - Considerare inizialmente solo attributi che caratterizzano possibili stati di interesse per gli oggetti
  - Adottare una convenzione standard per assegnare nomi agli attributi, ad esempio:

    le parole devono essere scritte in carattere minuscolo, separate da un carattere di *underscore* (es. `street_name`)

  - Ritardare l'aggiunta di operazioni fino al momento in cui sia disponibile il modello comportamentale, da cui vanno derivate