

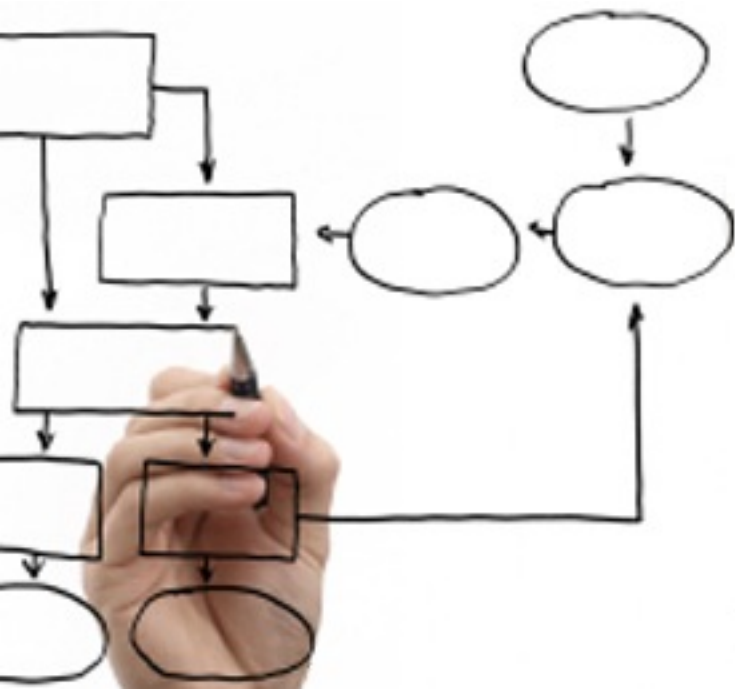
Business Processes Modelling

MPB (6 cfu, 295AA)

Roberto Bruni

<http://www.di.unipi.it/~bruni>

02 - Business processes



Digression...

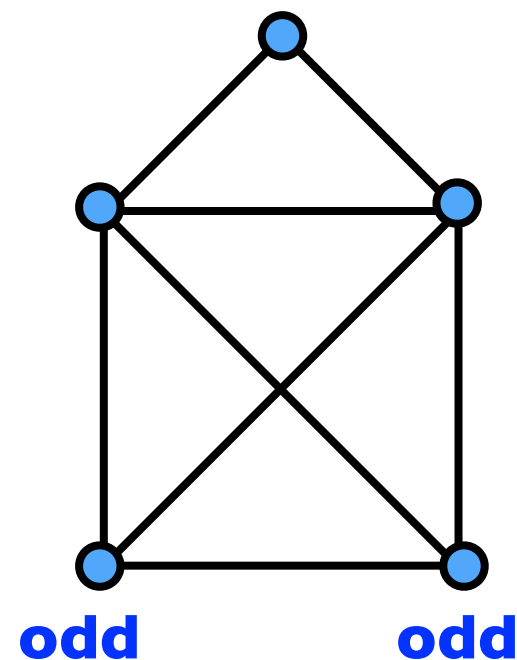
Theorem

A (connected) graph G contains an **Eulerian circuit**
if and only if
there are no odd vertices.

Theorem

A (connected) graph contains an **Eulerian path**
if and only if
there are 0 or 2 odd vertices.

Digression...

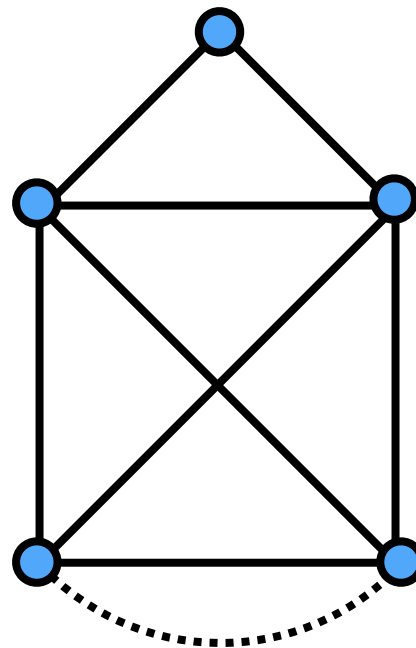


Eu path

no Eu circuit

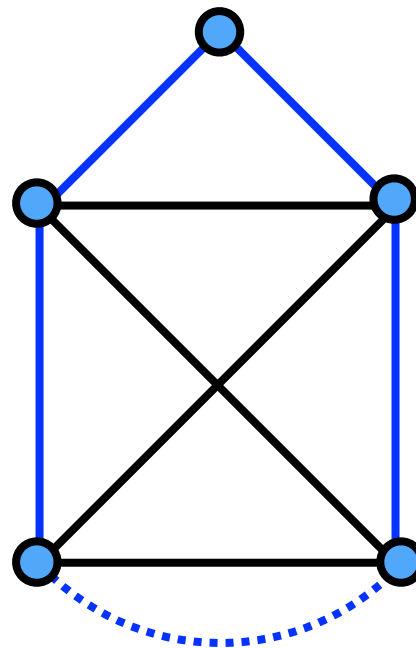
A childish puzzle

Digression...



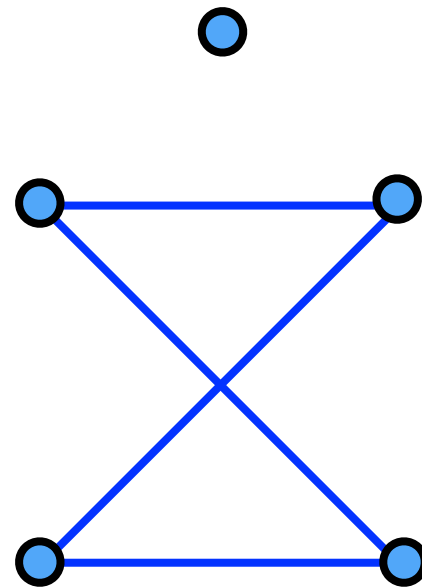
Add a dummy arc

Digression...



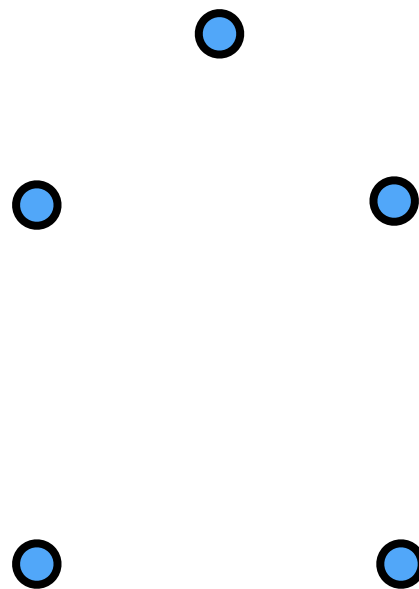
Find a cycle

Digression...



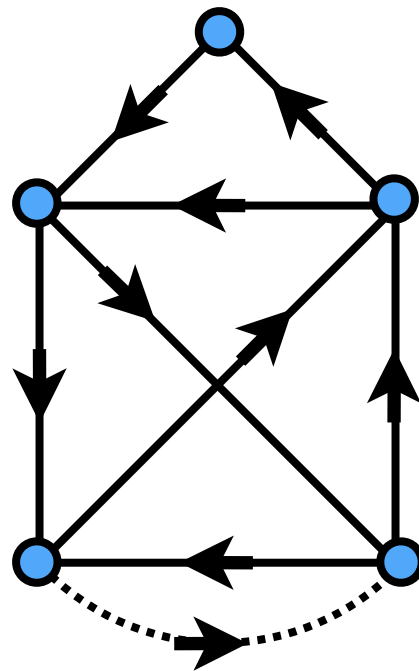
Find next cycle

Digression...



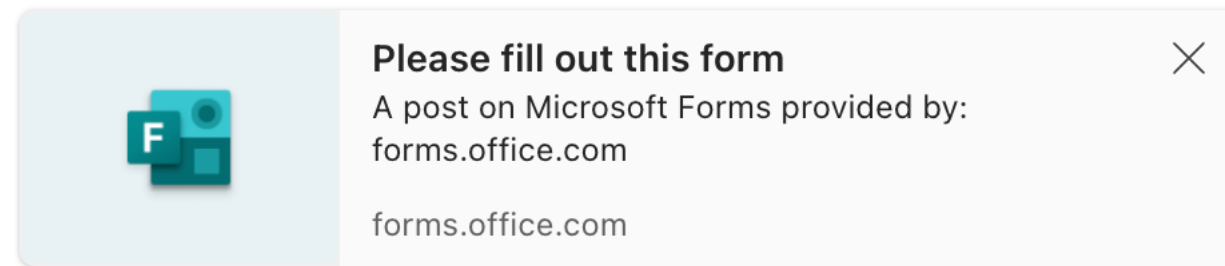
Done!

Digression...



Trace the path!

Memo: Who are you?



Background check (form)

Enrollment number:

Bachelor degree:

MSc course of enrollment:

Subjects of interest:

... :

Only 16 forms filled so far... please do it now

Let's start

Terminology

Terminology

Generic terms, widely applicable to different working situations and companies

We fix preferred terms when possible,
but allow synonyms interchangeably

Ch.1 of Workflow Management: Models, Methods, and Systems

Ch.1 of Business Process Management: Concepts, Languages, Architectures

Process Orientation

Work

Market

We are not capable to produce all we need
(or all we want, or that we are induced to want)
because we are not skilled enough



Products are supplied to people via **markets**
(distribution in exchange of money)

We buy products we cannot make ourselves

Other work emerge, that would not exist
(trading, banks, advertising, transportation, regulations, attorneys, insurance companies,
eCommerce, eHealth, influencers, ...)

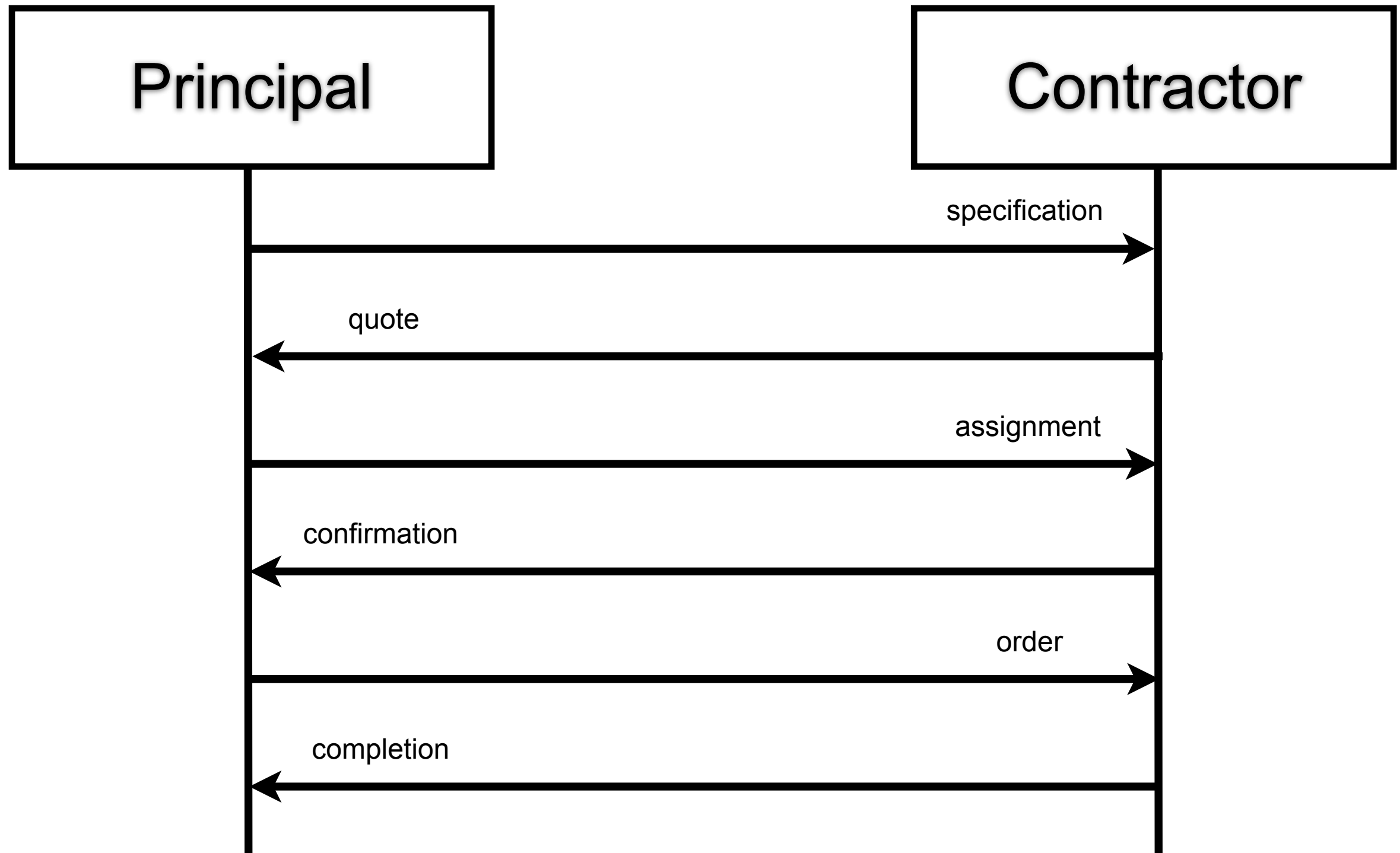
There are **services** and **products** necessary to keep the organization operating
(not making a direct contribution to keep us alive)

Organizational Structures

Network structure</

Actors

Protocol example



Actors

An **actor** can be a principal or a contractor, or
play both roles at the same time
(contractors may redirect work to third parties)

Cases and Procedures

Task

A **task** is a logical unit of work that is carried out as a single whole

Process Orientation

Collection

Processes wrap up a collection of tasks

