Distributed Software Development

Real-Time Bridge Monitoring Project Vision

Overview

- Team Organization
  - The Development Group
  - Roles and Responsabilities
  - Team Communication
- System description
  - Real-Time Bridge Monitoring System
  - Functionalities
- Architecture and Technologies

Overview

- Project Plan
  - 20/10 – 23/11
  - 24/11 – 28/12
  - 29/11 – 13/01
- Risks
- Question time

Team Organization

- The Development Group

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Dzana Kujan (MDH)

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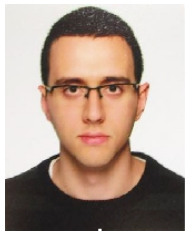
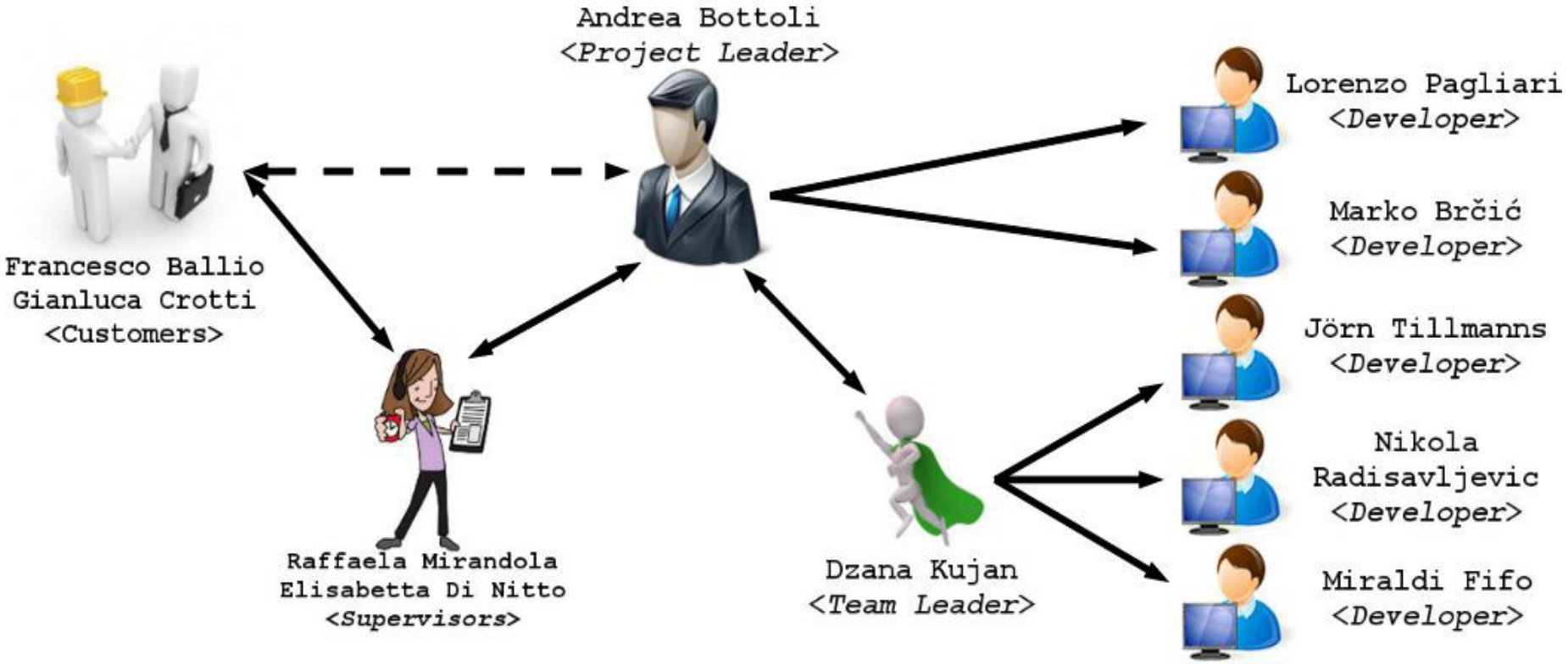
Miraldi Fifo (MDH)



Nikola Radisavljevic (MDH)

Team Organization

- Roles and Responsabilities



Team Organization

- Communication

System Description

- Real-Time Bridge Monitoring
  - People must take decisions during crisis
  - Based on confident data from math formulas
    - Bridge condition
    - Structural damage
    - Stresses
  - Store historical data to make some statistics
  - Show data on local and remote UI
  - User friendly UI

System Description

- Functionalities (I)
  - Gather sensors's informations
    - Anemometer: wind speed
    - Hydrometer: water level
    - Echo sounder: river bed depth
    - Cam: pillars pictures
  - Store informations into a DB
    - Current data
    - Historical data

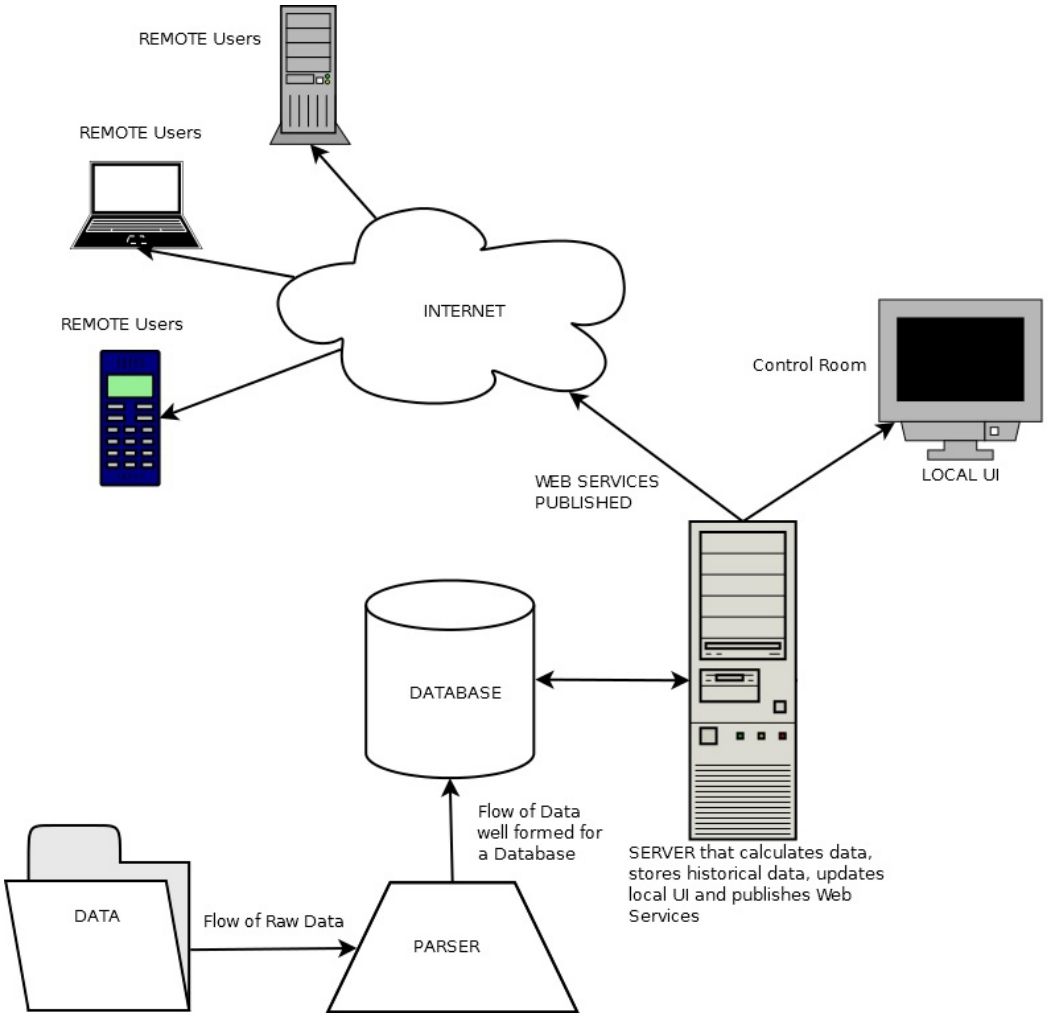
System Description

- Functionalities (II)
  - Make calculations on the data
    - Structural calculations, stresses, ...
  - Display data to users
  - Alert the users (pop up, e-mails, ...)
    - Green: “ok, it's good”
    - Yellow: “wait a moment...something's wrong”
    - Red: “ALARM, bridge is crashing down!!!!”
  - Personalize bounds, views, ...

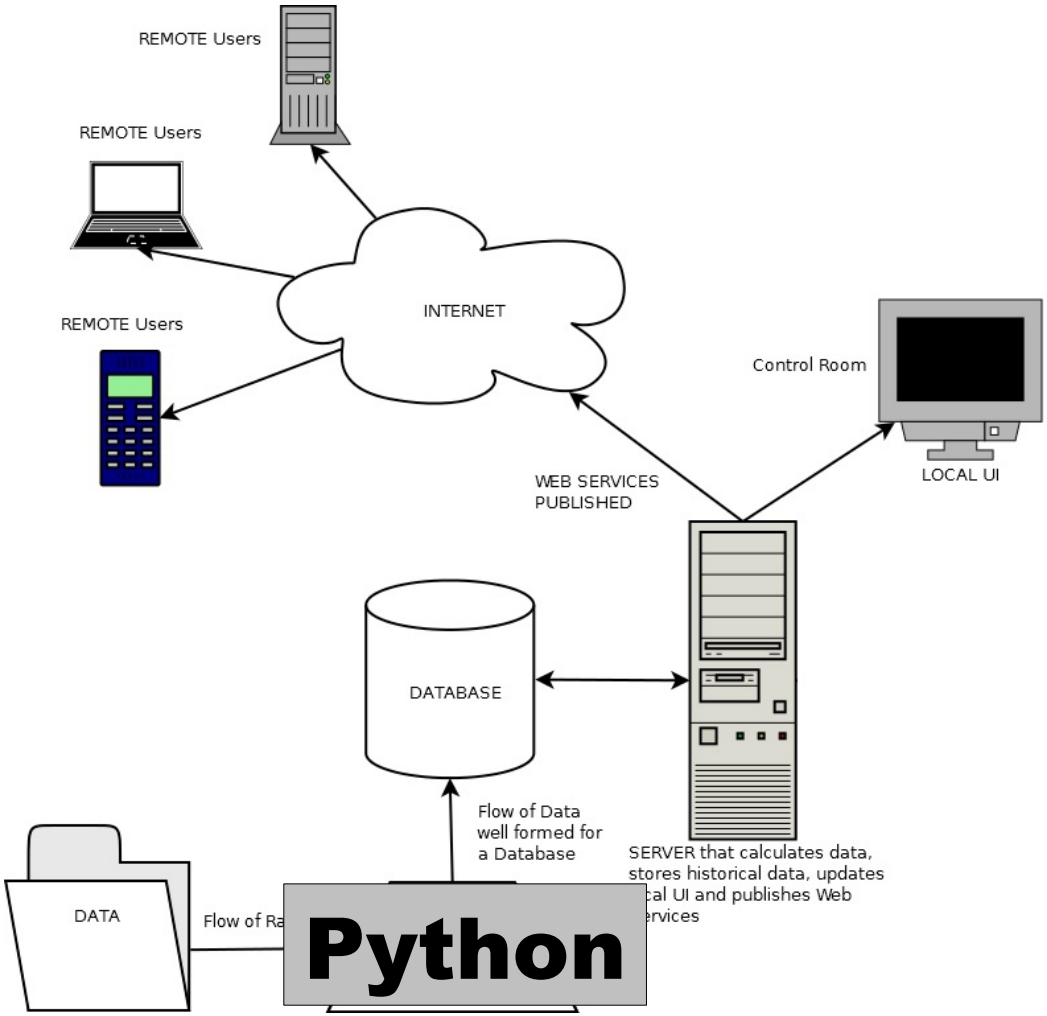
System Description

- Functionalities (III)
  - Graphs and statistics (with personalizations)
    - Display and browsing temporal trends
    - ...the flood is increasing his speed...
    - ...the wind is changing speed...
    - ...last year when X happened, Y happened...
  - Web Services
    - Remote users could use the system functionalities
    - Tablets, Smartphones, ...

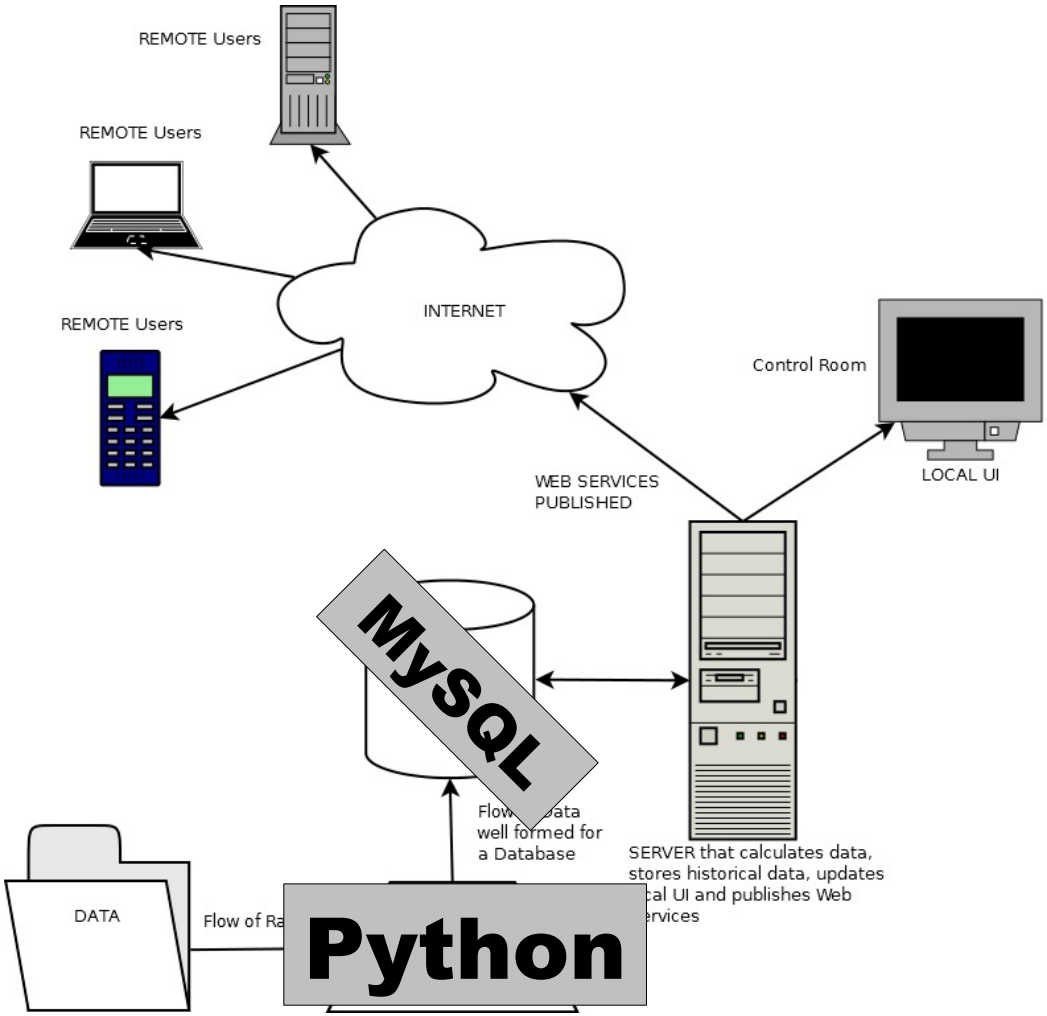
Architecture



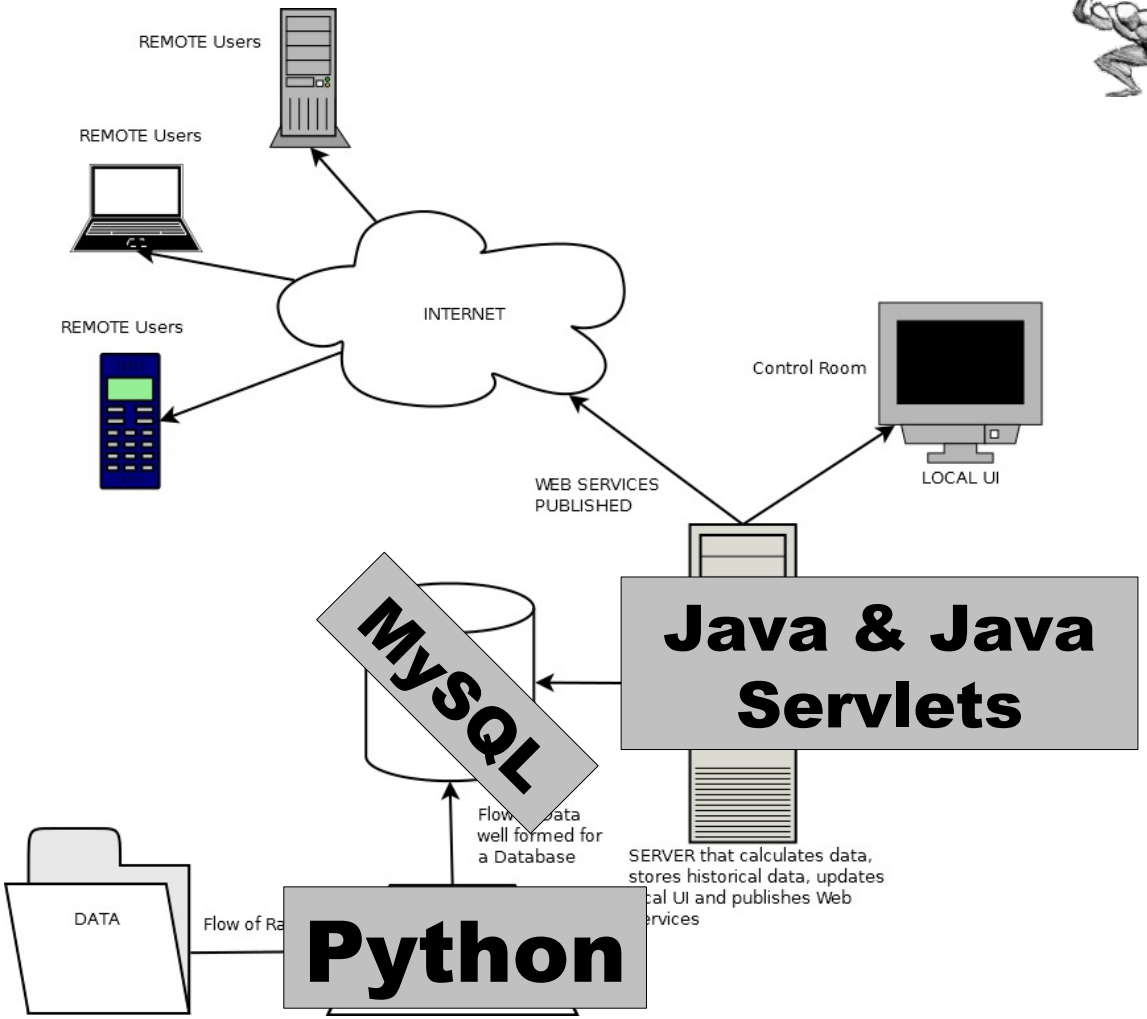
Architecture



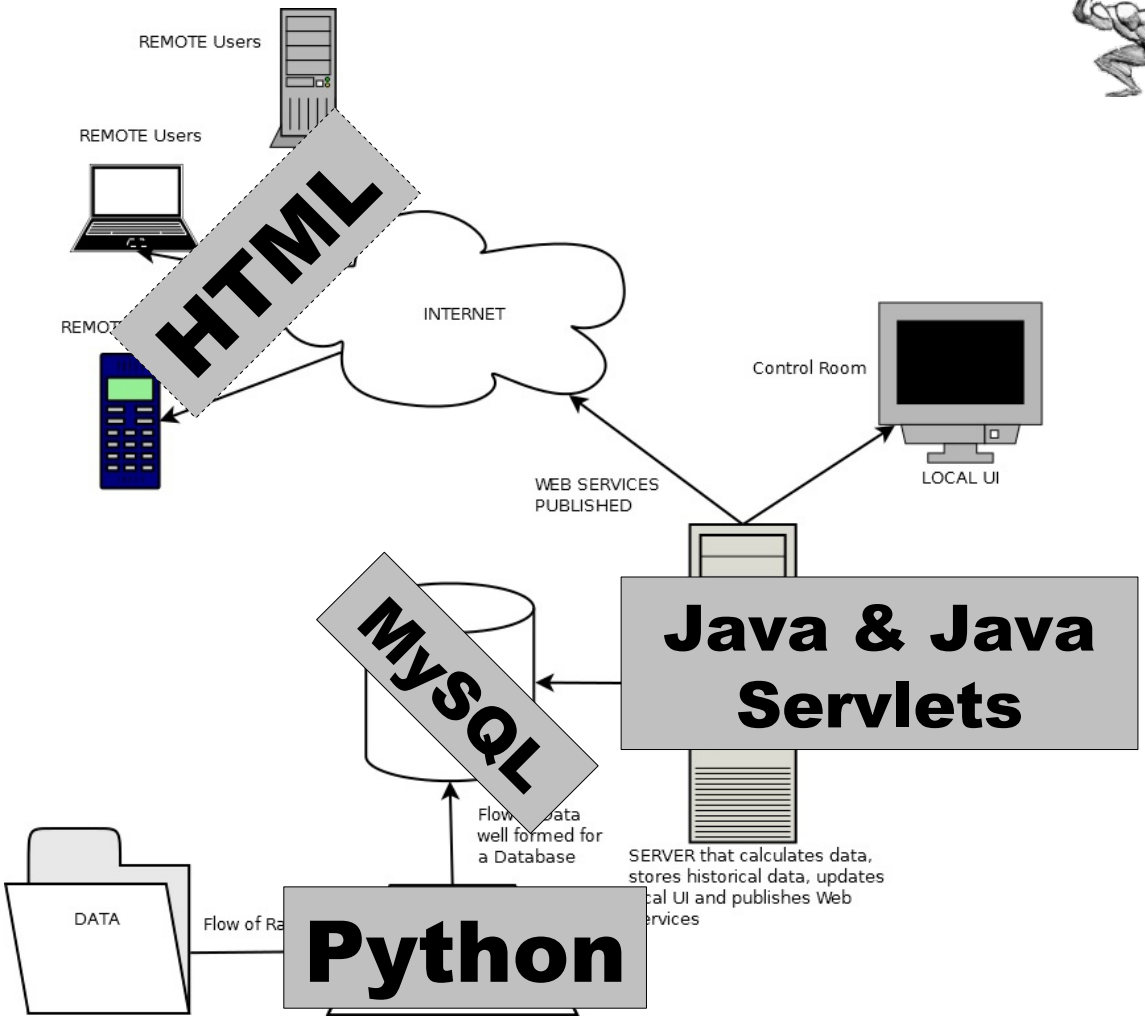
Architecture



Architecture



Architecture



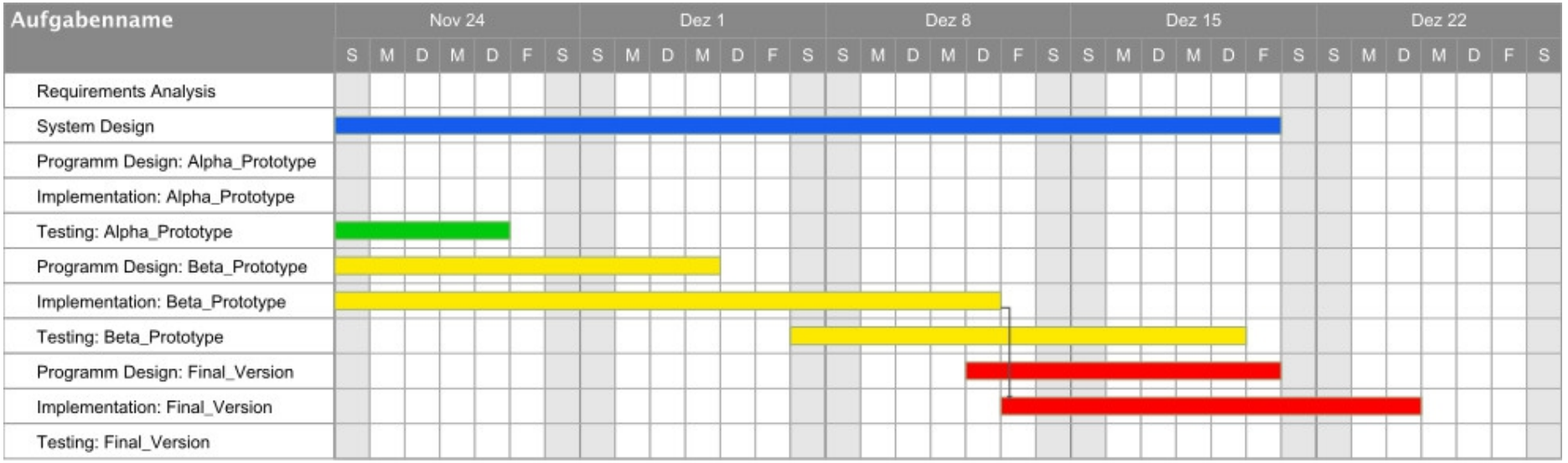
Project Plan

- 20/10 – 23/11

	Aufgabenname	Okt 20							Okt 27							Nov 3							Nov 10							Nov 17						
		S	M	D	M	D	F	S	S	M	D	M	D	F	S	S	M	D	M	D	F	S	S	M	D	M	D	F	S	S	M	D	M	D	F	S
1	Requirements Analysis																																			
2	System Design																																			
3	Programm Design: Alpha_Prototype																																			
4	Implementation: Alpha_Prototype																																			
5	Testing: Alpha_Prototype																																			
6	Programm Design: Beta_Prototype																																			
7	Implementation: Beta_Prototype																																			
8	Testing: Beta_Prototype																																			
9	Programm Design: Final_Version																																			
10	Implementation: Final_Version																																			
11	Testing: Final_Version																																			

Project Plan

- 24/11 – 28/12



Project Plan

- 29/11 – 13/01

Aufgabenname	Dez 29							Jan 5							Jan 12						
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Requirements Analysis																					
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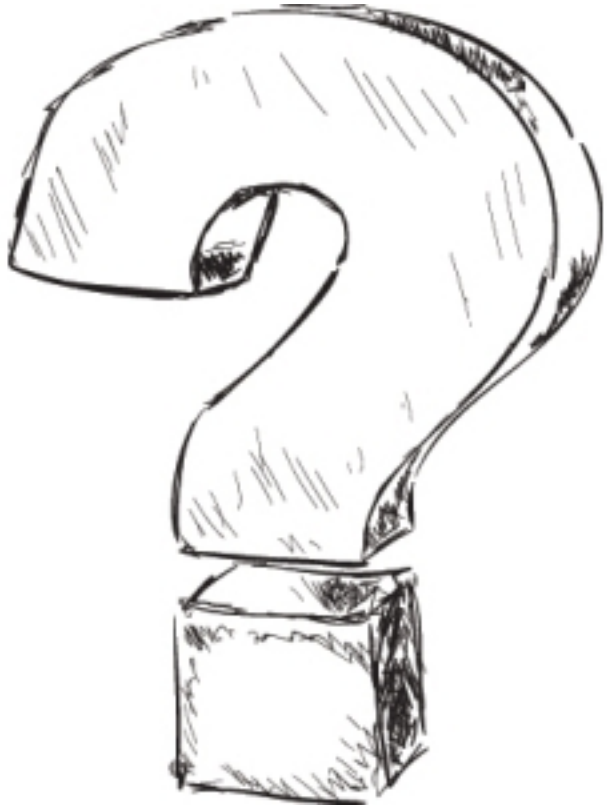
Programm Design: Final_Version																					
Implementation: Final_Version																					
Testing: Final_Version																					

Risks

- Communication
  - Within distributed groups (SWE, ITA, CRO)
  - Within the team
  - With customers
- Still unknown input data and data format
- Incomplete requirements

Question Time



Thank You

- Thank you for your attention :-)