

Homework III

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EE 382C Requirements Engineering

11/06/2015

Installation Requirements

- 2 GHz processors
The administrators expect faster computers.
- 2 GB memory
The administrators expect more computational capability.
- support for gigabit networks The administrators expect faster and more robust network communication.

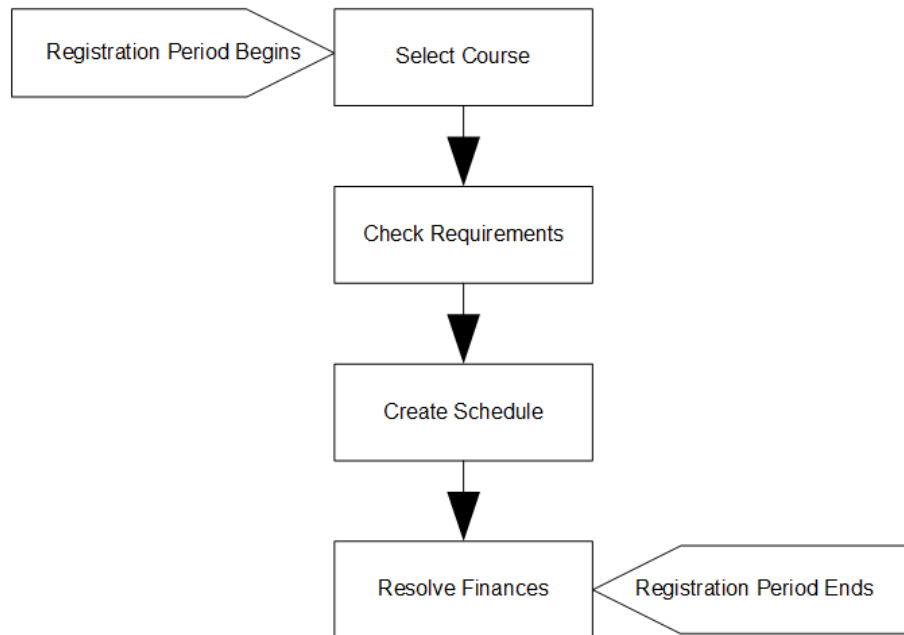
The hardware requirements change as better hardware becomes cheaper; better performance in systems is a constant want, if not need. Most local installations can expect the requirements for new hardware to increase with time.

Non-Functional Requirements

- "users expect no more than 2 seconds per transaction for all requests"
This applies to the system's runtime performance. It may be evaluated by executing system functionality and measuring system responsiveness.
- "Federal regulations require payment data to be encrypted when transmitted or stored"
This applies to the system's communication and data storage. It may be evaluated by grabbing dumps of databases or intercepting (sniffing) network communications of the system and ensuring the content is encrypted.
- "intention to extend the system with many additional services in the future" This applies to the system's architecture; an extensible framework must underpin the entire system so that it may be extended at a later date. This could be evaluated by having core pieces of the system implemented as modular plugins to some bare framework, bringing extensibility and demonstrative architecture to the system from the very beginning. If "registration" is a plugin, then it can be shown that additional functionality can be added later.

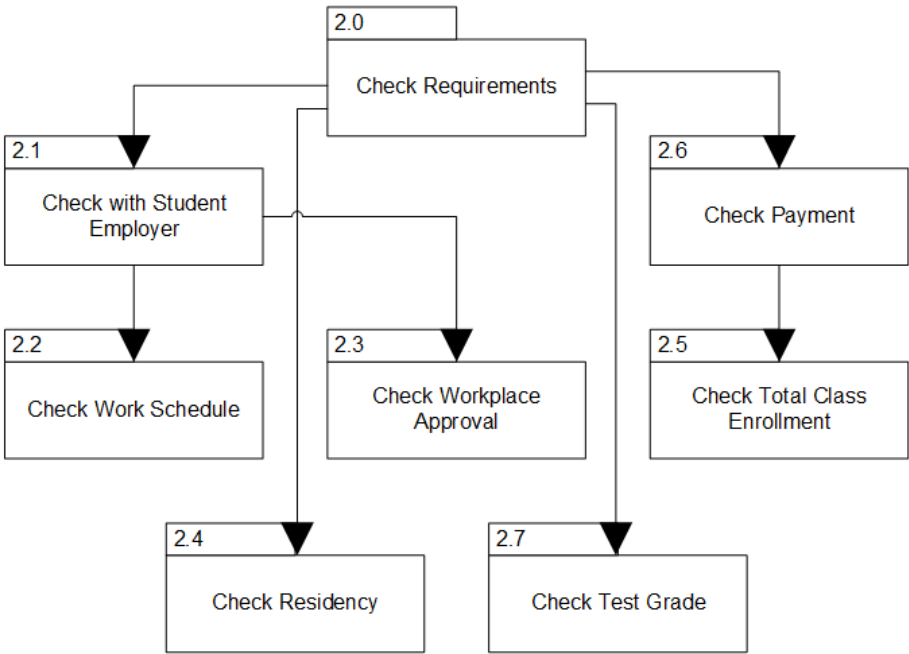
Operational Reference Model

| | |
|---------------------------|--------------------|
| RM Number | Admin_OR_001 |
| RA Source | Admin_Overview_001 |
| RE | Gregory Williams |
| Perspective | Admin |
| Date | 11/06/2015 |
| Date Revised | |
| Date Revised | |
| Date Stakeholder Approval | |
| RM Reference | Admin_TD_001 |
| RM Reference | |
| RM Reference | |



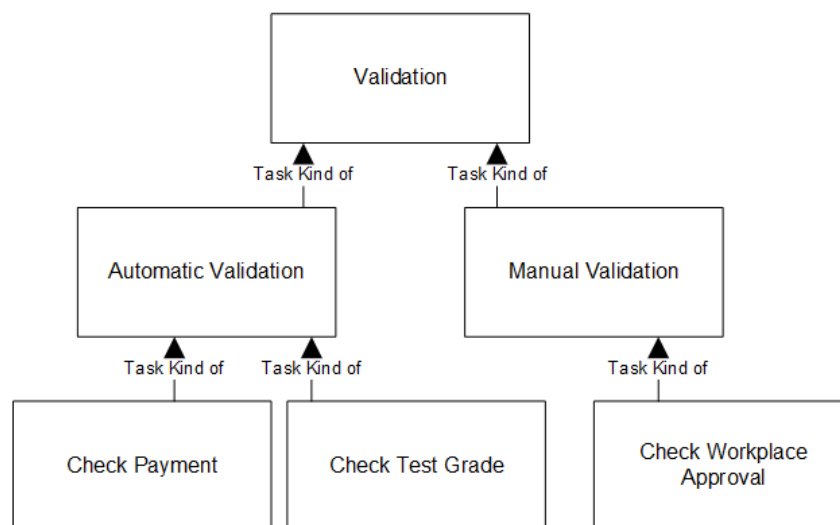
Task Decomposition

| | |
|---------------------------|--------------------|
| RM Number | Admin_TD_001 |
| RA Source | Admin_Overview_001 |
| RE | Gregory Williams |
| Perspective | Admin |
| Date | 11/06/2015 |
| Date Revised | |
| Date Revised | |
| Date Stakeholder Approval | |
| RM Reference | Admin_TT_001 |
| RM Reference | |
| RM Reference | |



Task Hierarchy

| | |
|----------------------------------|--------------------|
| RM Number | Admin_TH_001 |
| RA Source | Admin_Overview_001 |
| RE | Gregory Williams |
| Perspective | Admin |
| Date | 11/06/2015 |
| Date Revised | |
| Date Revised | |
| Date Stakeholder Approval | |
| RM Reference | |
| RM Reference | |
| RM Reference | |



Task Name: Check Residency Requirements

| | |
|----------------------|--------------------|
| RM Number: | Admin_TT_001 |
| RA/RM Source: | Admin_Overview_001 |
| RE: | Gregory Williams |
| Perspective: | Admin |
| Date: | 11/06/2015 |
| Date Revised: | |

Basic Task Information

| <i>Decomposition Reference</i> | <i>Duration</i> | <i>Frequency</i> | <i>Location</i> |
|--------------------------------|-----------------|------------------|-----------------|
| 2.4 | 1 minute | Discrete | School Network |

Performers

Registration System, Admin

Pre/Post Conditions

Pre Conditions

Input Data

| <i>Input Data Name</i> | <i>Cardinality</i> | <i>Data Condition</i> | <i>Sending Task</i> | <i>Sending Performer</i> |
|------------------------|--------------------|-----------------------|-------------------------------|--------------------------|
| Student Residency | One | AvailableAtTaskStart | Response from Student Records | Student Records Database |

Resource Constraints

| <i>Resource Name</i> | <i>Resource Condition</i> |
|----------------------|---------------------------|
| Student Record | AvailableAtTaskStart |

Post Conditions

Output Data

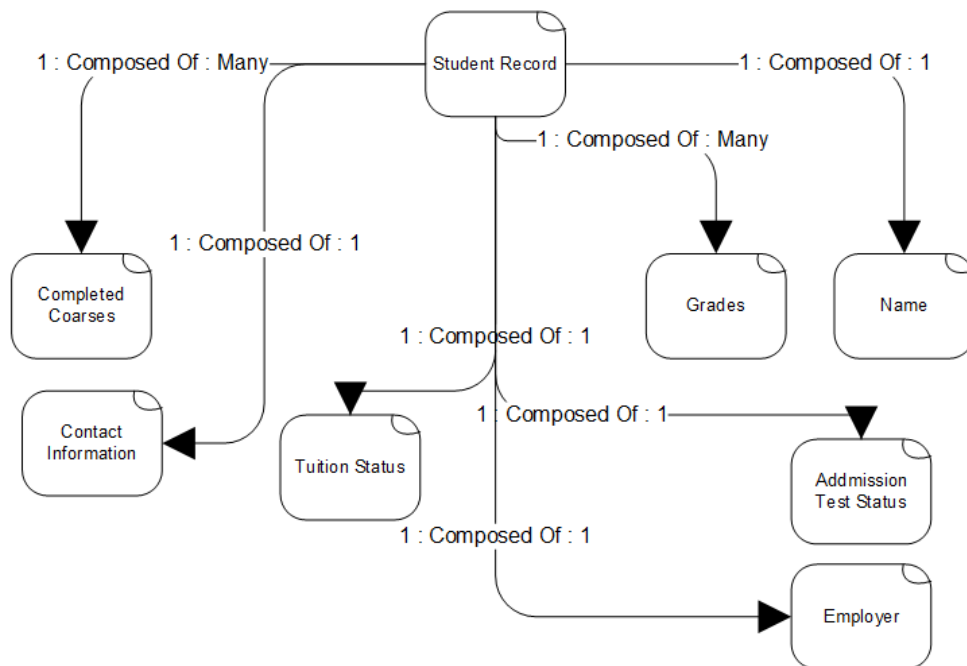
| <i>Output Data Name</i> | <i>Cardinality</i> | <i>Receiving Task</i> | <i>Receiving Performer</i> |
|-------------------------|--------------------|-----------------------|----------------------------|
| ResidencyStatus | one | Check Requirements | Registration System |

Output Event

| <i>Output Event Name</i> | <i>Receiving Task</i> | <i>Receiving Performer</i> |
|-------------------------------|-----------------------|----------------------------|
| ResidencyEligibilityConfirmed | Check Requirements | Registration System |

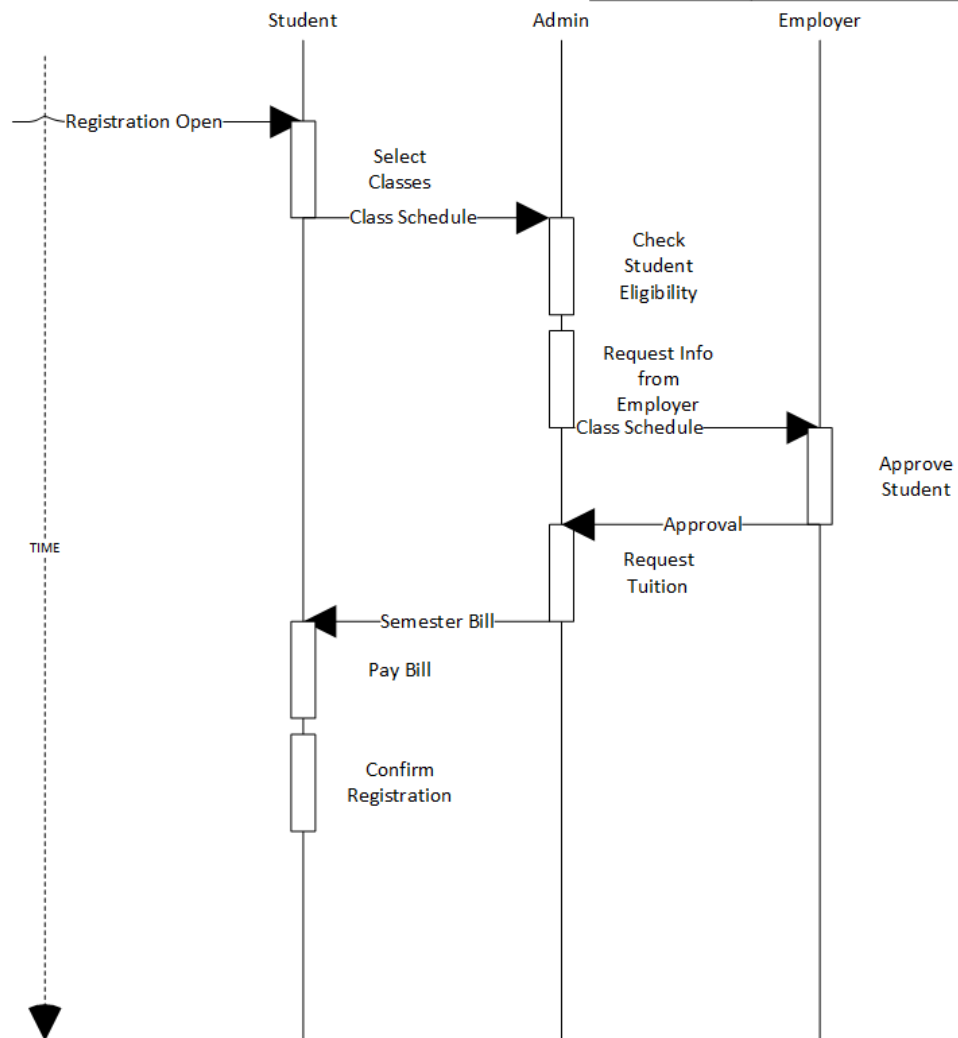
Entity Relationship Diagram

| | |
|---------------------------|--------------------|
| RM Number | Admin_ER_001 |
| RA Source | Admin_Overview_001 |
| RE | Gregory Williams |
| Perspective | Admin |
| Date | 11/06/2015 |
| Date Revised | |
| Date Revised | |
| Date Stakeholder Approval | |
| RM Reference | |
| RM Reference | |
| RM Reference | |



Temporal Sequence Diagram

| | |
|---------------------------|--------------------|
| RM Number | Admin_TS_001 |
| RA Source | Admin_Overview_001 |
| RE | Gregory Williams |
| Perspective | Admin |
| Date | 11/06/2015 |
| Date Revised | |
| Date Revised | |
| Date Stakeholder Approval | |
| RM Reference | |
| RM Reference | |
| RM Reference | |



Inconsistent Requirements

Acquire Priorities