

253

Days until end of senior project

SE Senior Project Expectations

facebook photo collage
Team T30 — Peter Bergeron, Kevin Kuchta, Matt Olenik, Bernard Stern, Chris Torswili
Sponsored by Kodak and assisted by faculty coach Karen Martinez

create and share photo collages within facebook
Make collages from your Facebook photos, share them with your friends, and print them with Kodak.

motivation
Facebook has 4.25 billion users and over 60 billion photos — an excellent marketing opportunity for Kodak. By producing interesting collages from user's own Facebook photos, we can both advertise for Kodak and create a memorable keepsake that can be printed through Kodak's fulfillment services.

architecture
The chromeless JavaScript makes AJAX requests to the Rails layer.
The Rails layer serves pages, interacts with Facebook and provides a web service to the chromeless code.
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current features

- Lay out collages by hand or automatically by algorithm
- Rotate, crop, resize and reposition photos
- Post photo collages to user's Facebook wall
- Automatically tag friends who appear in the images

future work

- Implement printing services
- Create photo books of collages
- Automatic image improvements such as red eye removal, sharpening, color adjustment, etc.
- Image effects such as border and drop shadows

scrum

- Rapid prototyping and high customer visibility through two week iterations
- Jira manages high impact milestones (Sprints) and Affix by having sprint-by-sprint improvements
- Most of the team had no experience with Scrum



Red Flags

Microsoft Excel - weekly-individual			
	A	B	C
1			First Term - Week 1
2			
3			Accomplished this week
4			Task
5	Done?	ACT	
6	Yes	0.5	Attended Expectations talk
7	No	1	Finish project
8			
9			
10			
11			
12			
13		1.5	TOTAL TIME
14			
15			Planned for next week
16			Task
17	EST	0.25	Figure out what this project is about
18			
19			
20			
21			
22			
23			
24			
25		0.25	TOTAL TIME
26			
27			Issues
28			This project is harder than I thought. The team should talk about it.
29			

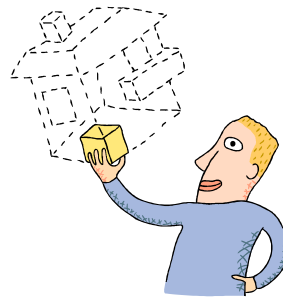
Materials relevant to all teams will be in the myCourses community.

Senior project requires you to demonstrate your ability to work as a professional software engineer.

- The skills, which you learned through coursework and co-op, span a broad range of professional behavior.



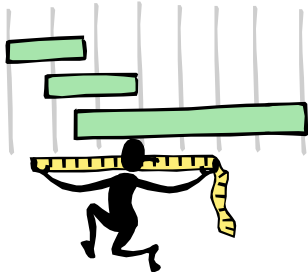
Working Project achieving
Quality Attributes



Creative Design



Professional Attitude to
the Project Sponsor



Project management



Problem solving



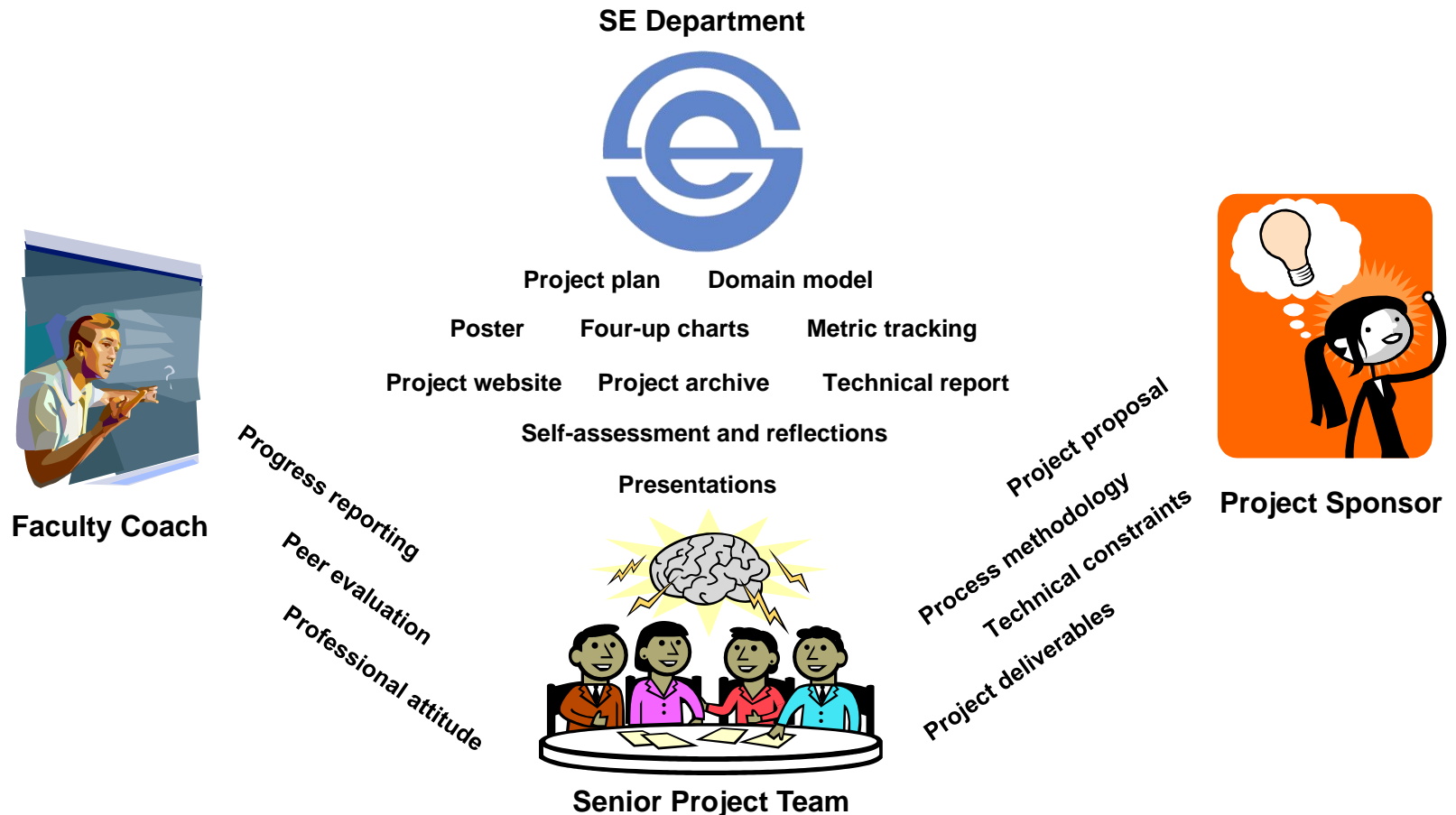
Professional teamwork



Project Planning

This is your project ...

- ... within the constraints and boundary conditions set by:



Project teams will sign project agreements.

**Student Course Project Intellectual Property and
Non-Disclosure Agreement**

**Student Course Project Limited Use and
Non-Disclosure Agreement**

**Student Open Source Course
Project Agreement**

Why do we have to do all this extra work?

This is not extra work. You are finding out about it now.

Work it into your project planning.

You may have a choice of process methodology.

- The methodology may be specified by your project sponsor.
- Choose the methodology based on the project. It does have an effect on the success of the project.
 - Over 200 past senior projects has told us
 - *Iterative* delivery has yielded the highest probability of a successful project.
 - *Waterfall* works reasonably well too.

You will use an established development methodology.

Using “agile” has not worked ...
... because it is not a methodology.



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Your team will be held to the approach of the established methodology you choose to use.

- Waterfall flavor: requirements, design, ...
- Iterative: defined iterations, iteration requirements, ...
- Spiral: risk-driven planning, requirements, end of cycle review,...
- Scrum style: project backlog requirements elicitation and estimating, sprint backlog estimating, daily stand-up meetings, burndown charts, sprint retrospective, ...
- Etc...

- The team must do time/effort reporting
- Two other product/process metrics appropriate to the project.

Microsoft Excel - weekly team

File Edit View Insert Format Tools Data Window Help

75%

Reply with Changes... Egd Review...

H43

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Team Name:													
2	Individual reporting file names.													
3														
4														
5														
6														
7														
8														
9														
10	First Term		Number of weeks:		0		Each week, increment the number of weeks reported for the term.							
11														
12	Totals													
13	Avg Act	Act	Est	Vk1Act	Vk2Est	Vk2Act	Vk3Est	Vk3Act	Vk4Est	Vk4Act	Vk5Est	Vk5Act	Vk6Est	Vk6Act
14														
15														
16														
17														
18														
19	Team totals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20														
21														
22	Second Term		Number of weeks:		0		Each week, increment the number of weeks reported for the term.							
23														
24														
25	Second Term													
26	Avg Act	Act	Est	Vk1Est	Vk2Est	Vk2Act	Vk3Est	Vk3Act	Vk4Est	Vk4Act	Vk5Est	Vk5Act	Vk6Est	Vk6Act
27														
28														
29														
30														
31														
32	Team totals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33														
34														
35	Entire Project		Number of weeks:		0									
36														
37														
38	Entire Project													
39	Avg Act	Act	Est											
40														
41														
42														
43														
44														
45	Team totals	0.00	0.00	0.00										

To update the have all of the reporting files button to open

Open Workbooks

Recalculate

Even when you have all of the indivi reporting files opened, a recalculation triggered in this team reporting file. F uture to force a recalculation of the to

There is a strong correlation between working on the project and delivering a successful project.

- There is an expectation for each student to work, on average, **8 – 12 hours/week** on the project.
- A lack of evidence of diligent effort on the project, in conjunction with poor project results and sponsor dissatisfaction, will reflect negatively in final grades.

All teams will do weekly four-up charts.

- A four-up chart contains four areas:
 - Completed activities from last week
 - Planned new or ongoing activities for next week
 - Risks
 - Needs
- This will be discussed with the faculty coach and often is the first thing discussed at the weekly sponsor meeting.

Here are some guidelines that you will follow for your weekly four-up charts.

- Maintain a file of all four-ups with current first
- **Every** team member should have a presence **each week** in the **completed** and **planned** activities.
- Show the risks that are most important.
- It will be a rare week when the four-up chart has no risks, and the risks will typically change week to week.
- Needs are what you need from someone outside of the team. It can be information, resources, completion of a task, ...

A good risk management process is critical to project success.

- Risk management is a daily/weekly, dynamic process.
- Pay **little attention** to planning, prevention, and mitigation strategies for the low probability “team member is run over by a bus” risks.
- Pay **a lot of attention** to planning/working prevention and mitigation strategies for the high probability “We do not know how to do X” risks.
 - Prevent these with well-specified requirements, and spike technology solutions
 - Have mitigation strategies, i.e alternate well understood approaches with trigger dates for taking action

Project scope is a major risk.

- Many sponsors prepared proposals with the guidance “do not be afraid of scope”.
- Part of your job is to assess project scope, and negotiate scope, if necessary.
- You will be accountable for what you agree to.
- Keep communicating with the sponsor on this. “When are they going to tell me they can’t get this done?”

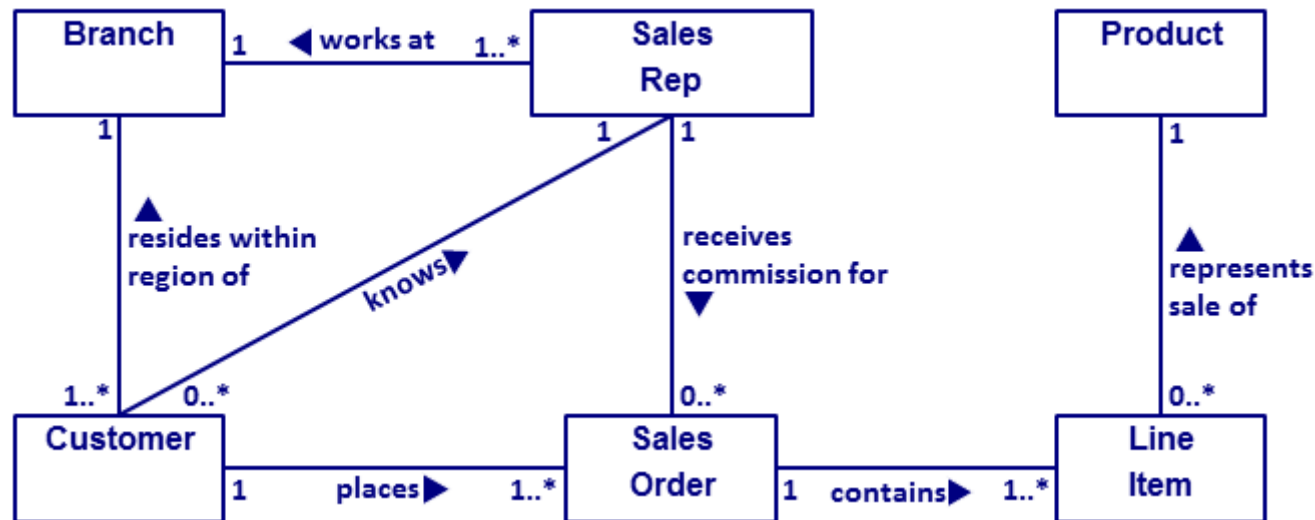
Beware of the Red Flags!

Advice from the Trenches

- Choose a good team coordinator to keep the project moving and everything in control.
- Spend time on the requirements.
- Make sure you understand the requirements before jumping into implementation.
- Understand the domain, then the requirements, and then figure out what needs to be done to fulfill those requirements with as much detail as possible.
- Have strategies to mitigate your risks.
- Teams should be as proactive as possible and not be afraid to ask questions, either from a sponsor, faculty coach, or team member when you are unclear about something.
- Don't be afraid to tell the sponsor 'no' when it comes to change requests.
- Communicate early and often with your project sponsor and keep them notified of any issues encountered. Sponsors can be very understanding if they are well-informed, while project delays without explanation will certainly draw some ire.
- Plan to be done coding by the end of week 12 of the second term.
- Don't underestimate the project. Things are tougher than they appear.
- Try to have fun with your team members. You will be working closely with them for many months, so it's good to start making positive relationships.

It is important to gain an early understanding of the problem domain.

- Each team will create a domain model for the project scope by the end of week 4 of the first term.



Some of you may wonder how senior project is graded.

- Welcome to the world of evaluating professional performance.
- Projects are very different with very different goals, approaches, methodologies, deliverables, etc.
- There are no fixed, graded elements for your project.
- One factor in the team's grade is the project sponsor's satisfaction with the project work, and your delivery on agreed to requirements.
- Your faculty coach will also consider individual contributions.
 - Repository commits, pull requests, code reviews
 - Requirements and planning activities
 - Meeting participation
 - There will be audit trails of activities showing contributions

Please Act Professionally

You are ambassadors for the SE program and senior project.

Many sponsors have returned with second, third, or more projects.

We would like this to continue.

Just a few last points

- You will get
 - Swipe card access to the team rooms
 - Team account, if you want one
 - A space reserved for the weekly meeting with your project sponsor
- You can request
 - A space for setup of specialized equipment needed for the project
 - Linux or Windows virtual machine for development or to match a deployment environment

Have a great senior project!