An Introduction to the Topics Course

Department of Computing, Imperial College London
Topics course organiser (Maria Valera and Catarina Fernandes)
m.valera-espina@imperial.ac.uk
c.aires-fernandes@imperial.ac.uk
Huxley Building 228
Slides based on Tristan Allwood notes

Schedule- Thursday 15Th

- 14.00h - 14.30h: Dr Maria Valera (Topics course organiser)
- 14.30h - 15.00h: Dr Bjoern Schuller
- 15.00h - 15.10h Break
- 15.10h - 15.40h: Dr Herbert Wiklicky
- 15.40h - 16.10h: Prof. Duncan Gillies
- 16.10h - 16.20h Break
- 16.20h - 16.50h: Dr Peter McBrien

Schedule- Friday 16Th

- 14.00h - 14.30h: Dr Fariba Sadri
- 14.30h - 15.00h: Prof. Chris Hankin
- 15.00h - 15.10h Break
- 15.10h - 15.40h: Prof. Abbas Edalat
- 15.40h - 16.10h: Dr Stefan Leuteneger
- 16.10h - 16.20h Break
- 16.20h - 16.50h: Dr Catarina Fernandes (Topics course organiser) - How to reference and Questions and Answers about Topics

Introduction to the Topics in Computing Course

The topics element of the first year is to give you experience of Problem Based Learning and working in groups.

- Problems are research oriented
- Students work in small groups
- Staff are facilitators rather than teachers.

Problem based learning is intended to help you develop transferable skills - those that you can apply to any activity.

What you have to do

- Background study on a topic of research interest.
  - Transferable Skill: Self directed learning
- Write a web article on the subject aimed at an intelligent, non-specialist, audience.
  - Transferable Skills: Technical writing, web design.
- Present your results in a short talk at the Topics-Fest.
  - Transferable Skill: Communication

What not to do

1. Find a popular article on the subject
   - (eg from Wikipedia)

2. Cut and paste it into a web page whose layout you like.
   - If you do this you will receive a zero mark!

The Topics:

- Automated Music Emotion Recognition
- Quantum Computation
- Affective Computing
- Big Data
- Intention Recognition
- Cyber Security
- Neural Networks and their applications
- Multi-Sensor Robot Localisation and Mapping

Getting Started

1. Initial reading:
   - Popular web articles (wikipedia etc.)
   - Recommended reading (from your supervisor)

2. Deeper study:
   - Frequently cited articles (Google Scholar)
   - Articles referred to in the initial reading

3. Group meetings:
   - Aim to have a group discussion each week.
   - Discuss individual reading and decide the plan for the week

As you progress

1. Always make summary notes on the articles you read.

2. Try to organise the material around research issues rather than individual articles.

3. Draft your material directly in html

Finishing off

Once the content is complete and well organised you can beautify your web site:

1. Find attractive appropriate pictures (remember to cite the source)
2. Draw some illustrative schematic diagrams
3. Get a good distribution of material in the web pages.

Prepare slides for the talk using the same images and diagrams on the web site.

Presentations

Every group gives a short presentation on Topics Fest Day at the end of term.

All presentation material must be displayed through a browser. This is to avoid excessive turn-round delays.

The easiest way to do this is to prepare the slides using open-office or powerpoint and save them as a pdf file.

The restriction means that animations must be constructed explicitly, ie you need a separate slide for each stage of an animation.

Support

Remember that this is an exercise in Self Directed Learning.

It is therefore up to you to decide on the direction you go in and the material you study

However there are three contact times when the group leader can see your supervisor to discuss progress

- Week 2: Discuss initial reading
- Week 5: Optional Progress Meeting
- Week 8: Optional Progress Meeting

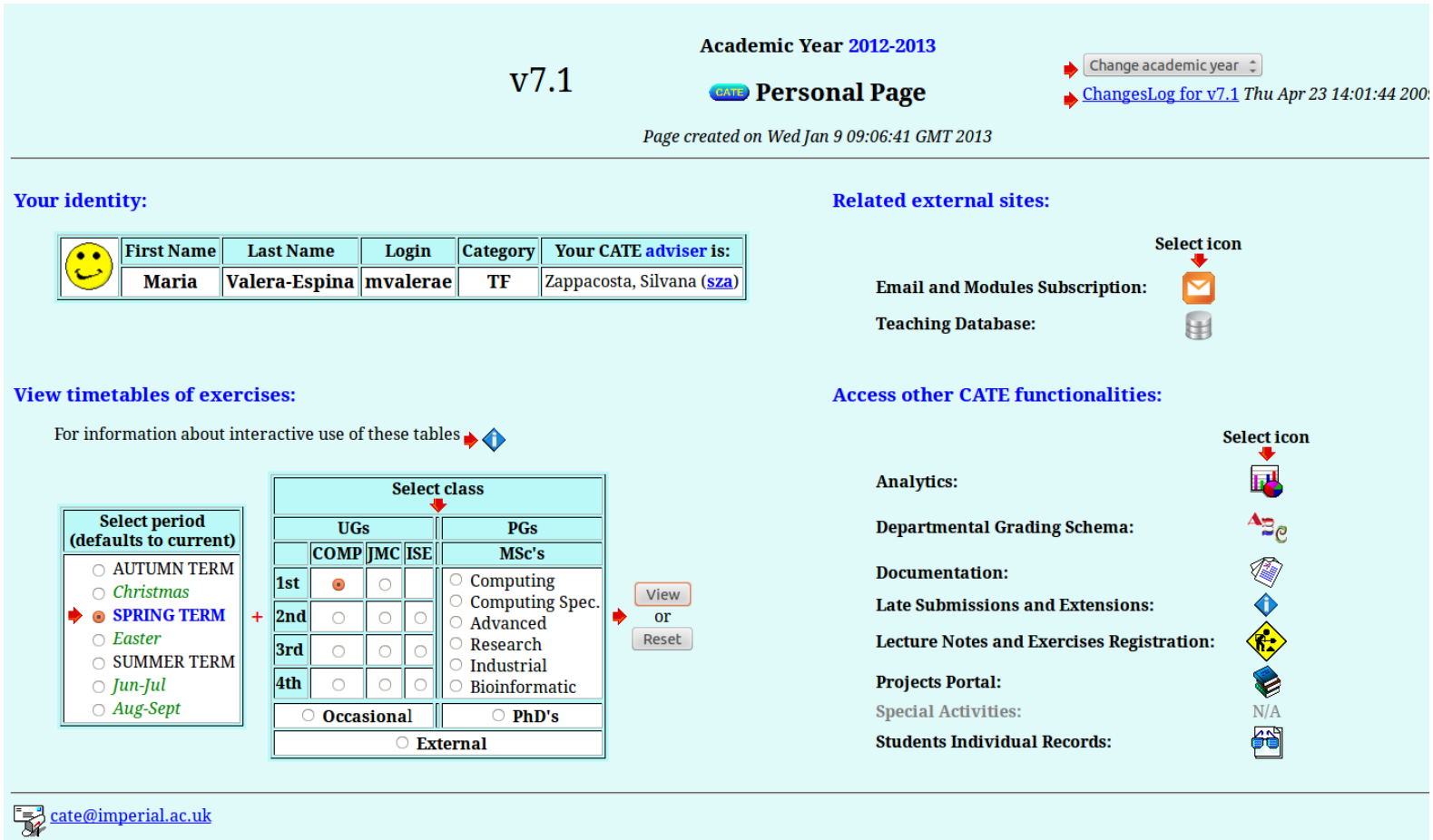
Formation of Groups

You should build groups of 2,3 or 4 in size.However, groups will be made by 4 as required.

If you want to form a group with particular friends you should use the projects portal system linked from CATE (more on the next slide).

The leader of the group will rank the topics based on the talks. The ranking goes from 1 (first choice) to 6 (last choice).

Formation of Groups



Formation of Groups

Academic Year 2012-2013

Projects Portal

Your identity:

	First Name	Last Name	Login	Category
	Maria	Valera-Espina	mvalerae	TF

Access to projects information and administration:

- For **general information** on the logistics of the projects follow the appropriate Info link. These are maintained by the corresponding Organiser; all relevant enquiries should be addressed to them.
- For **detailed administrative** aspects of the projects (proposals, offers, selections, allocations, timetables and others as applicable) follow the appropriate Admin link. The functionality is controlled by the deadlines imposed by the corresponding Organiser.

Generic title	Organiser	Modules targeted	Class(es)	General Information	Administration
3rd Year Group Project	Anandha Gopalan (axgopala)	362 - 3rd Year Group Projects	j3 c3	Info	Admin
UG Individual Project	Anandha Gopalan (axgopala)	301 - Individual Project BEng	c3 occ	Info	Admin
		301I - Individual Project BEng - ISE	i3		
		301J - Individual Project BSci - JMC	j3		
		401 - Individual Project MEng	occ c4		
		401I - Individual Project MEng - ISE	i4		
		401J - Individual Project MSci - JMC	j4		
MRes Research Project (1st)	Krysia Broda (kb)	513 - MRes Research Project (1st)	r5	Info	Admin
MSc Group Project	Reuben Rowe (rnr07)	530 - Software Engineering Practice	v5	Info	Admin
		533 - Software Engineering Group Project	s5		
MRes Research Project (2nd))	Krysia Broda (kb)	514 - MRes Research Project (2nd)	r5	N/A	Admin
Independent Study Option	Timothy Kimber (tk106)	512 - Independent Study Option	a5 s5	Info	Admin
		523 - MAC Individual Project	a5		
		541 - MSc Computing Science Individual Project	v5		

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		542 - MSc Computing Science (Specialist) Individual Project	s5		
		543 - MRes Individual Project	r5		
1st Year Computing Topics	Maria Valera-Espina (mvalerae)	163 - Computing Topics	c1	N/A	Admin

Analytics:

- Statistical distribution of active proposals and allocations *(access restricted to staff)*

Personal Page

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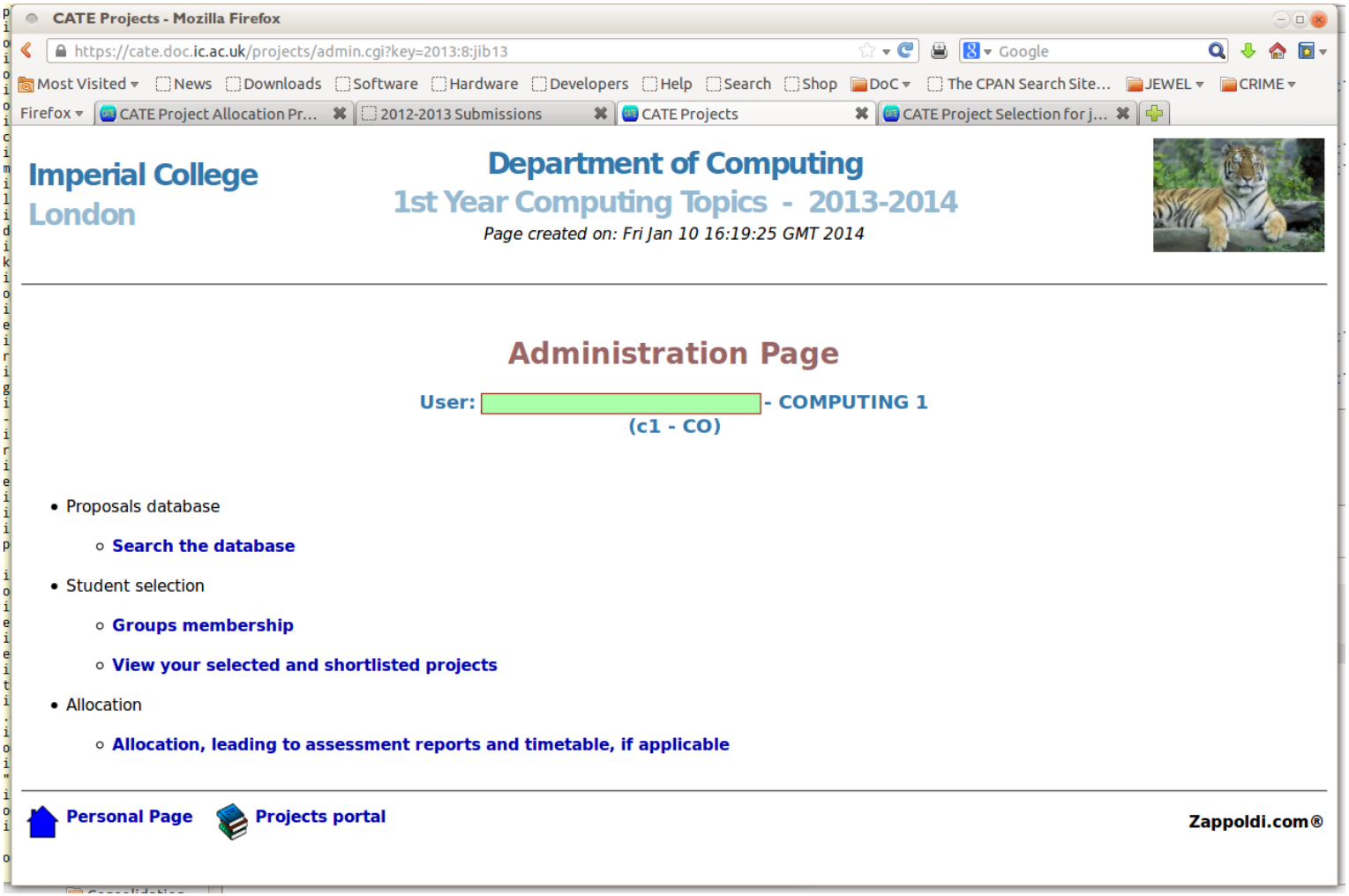
Formation of Groups



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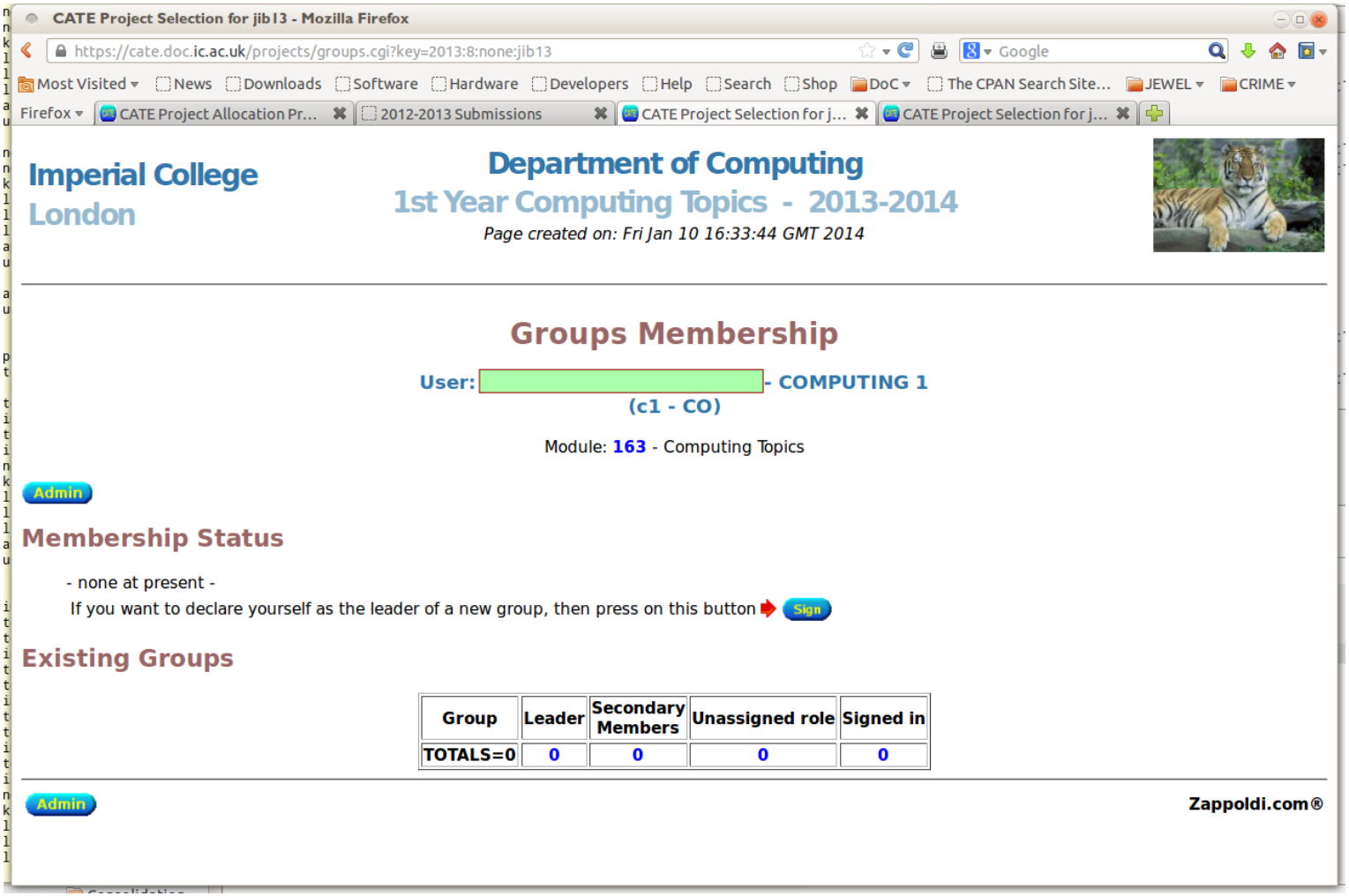

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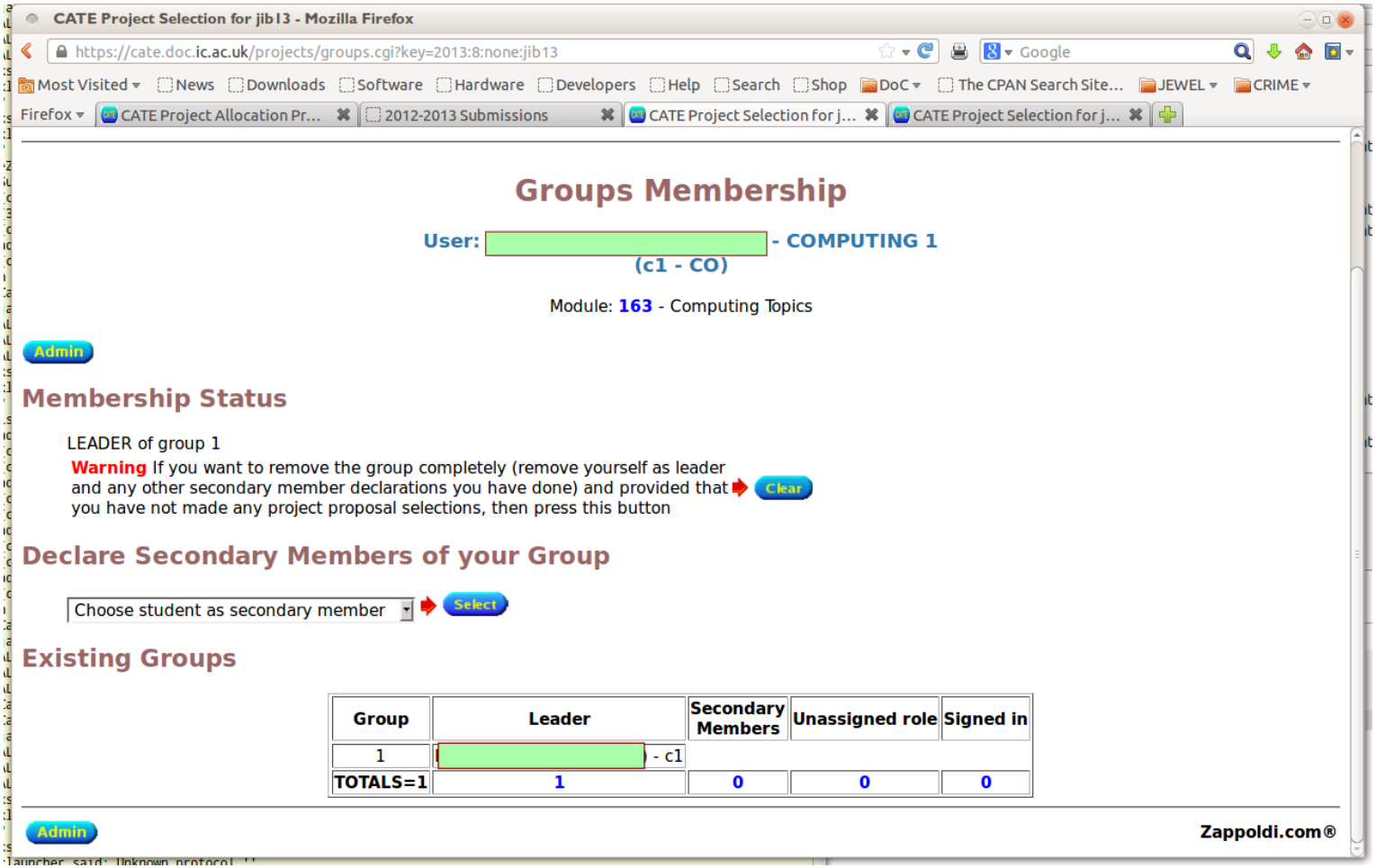

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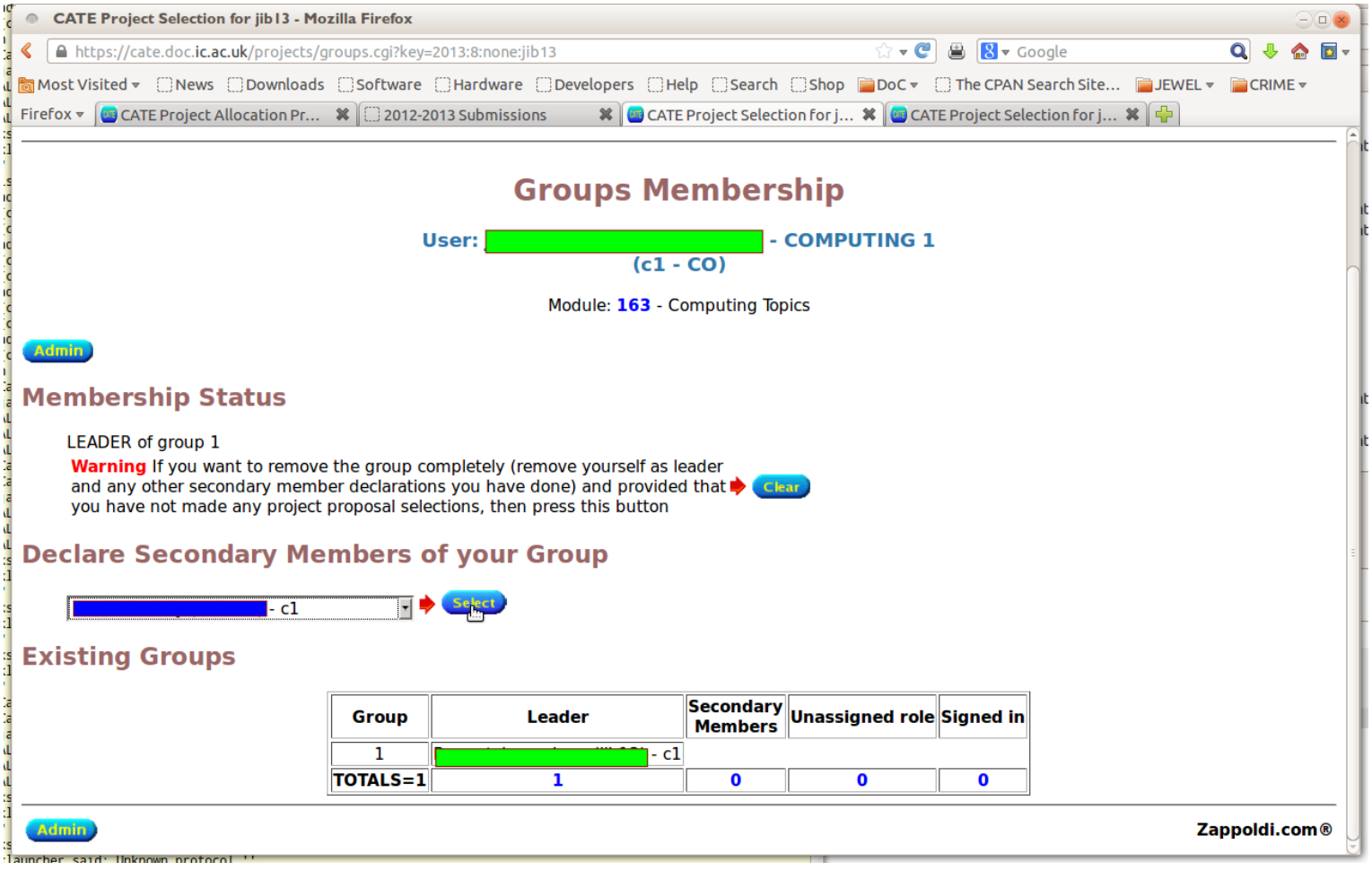

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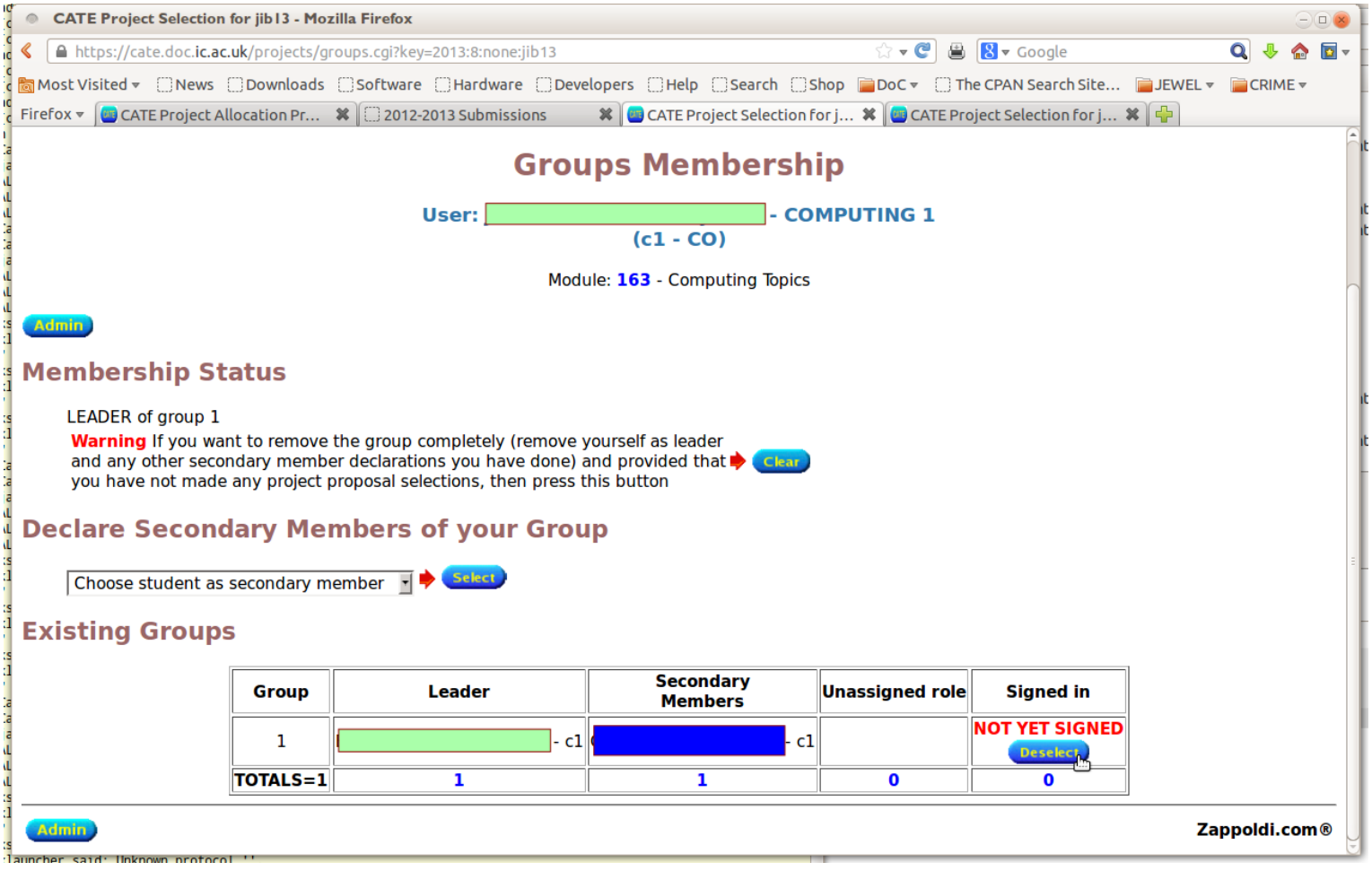

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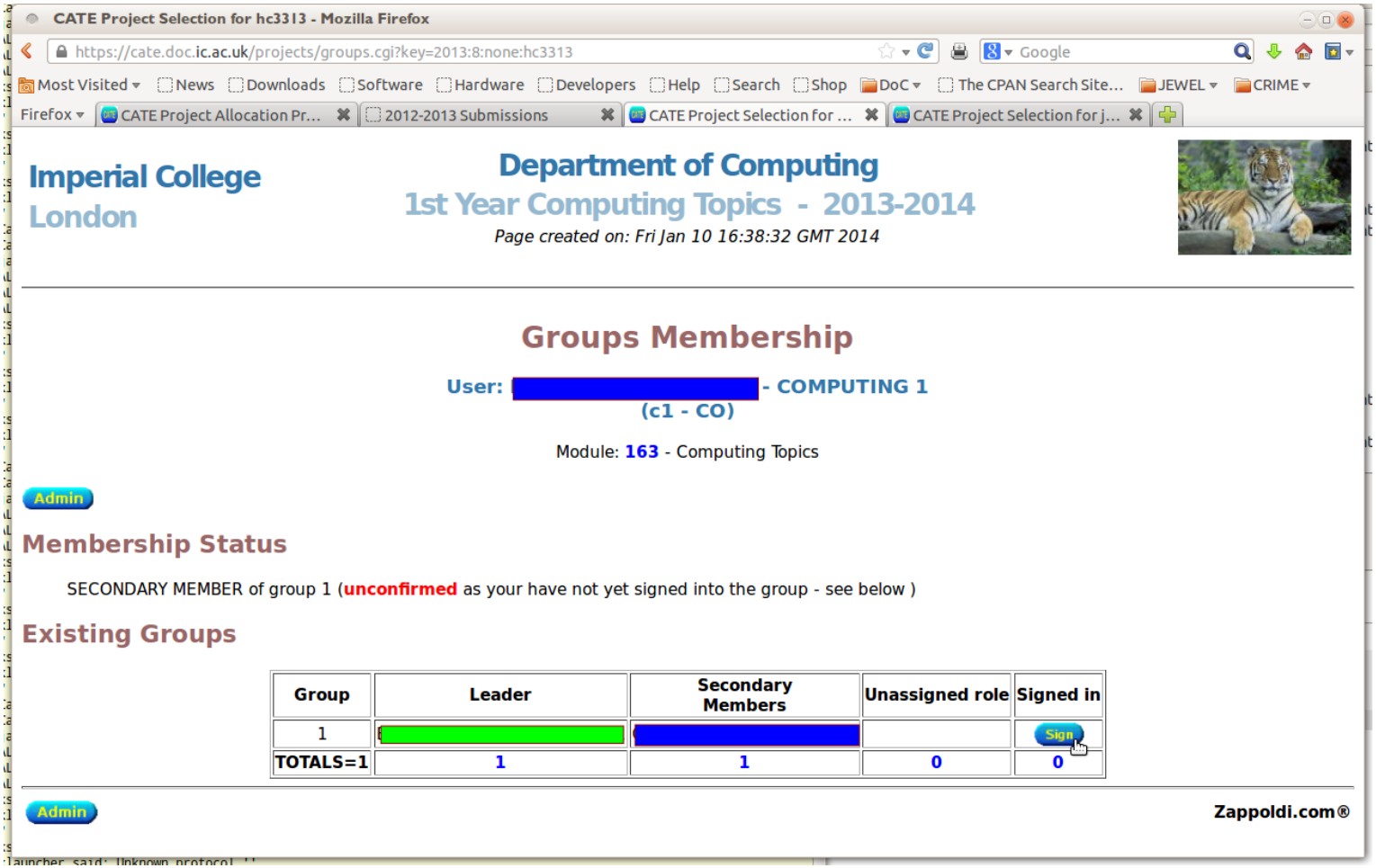

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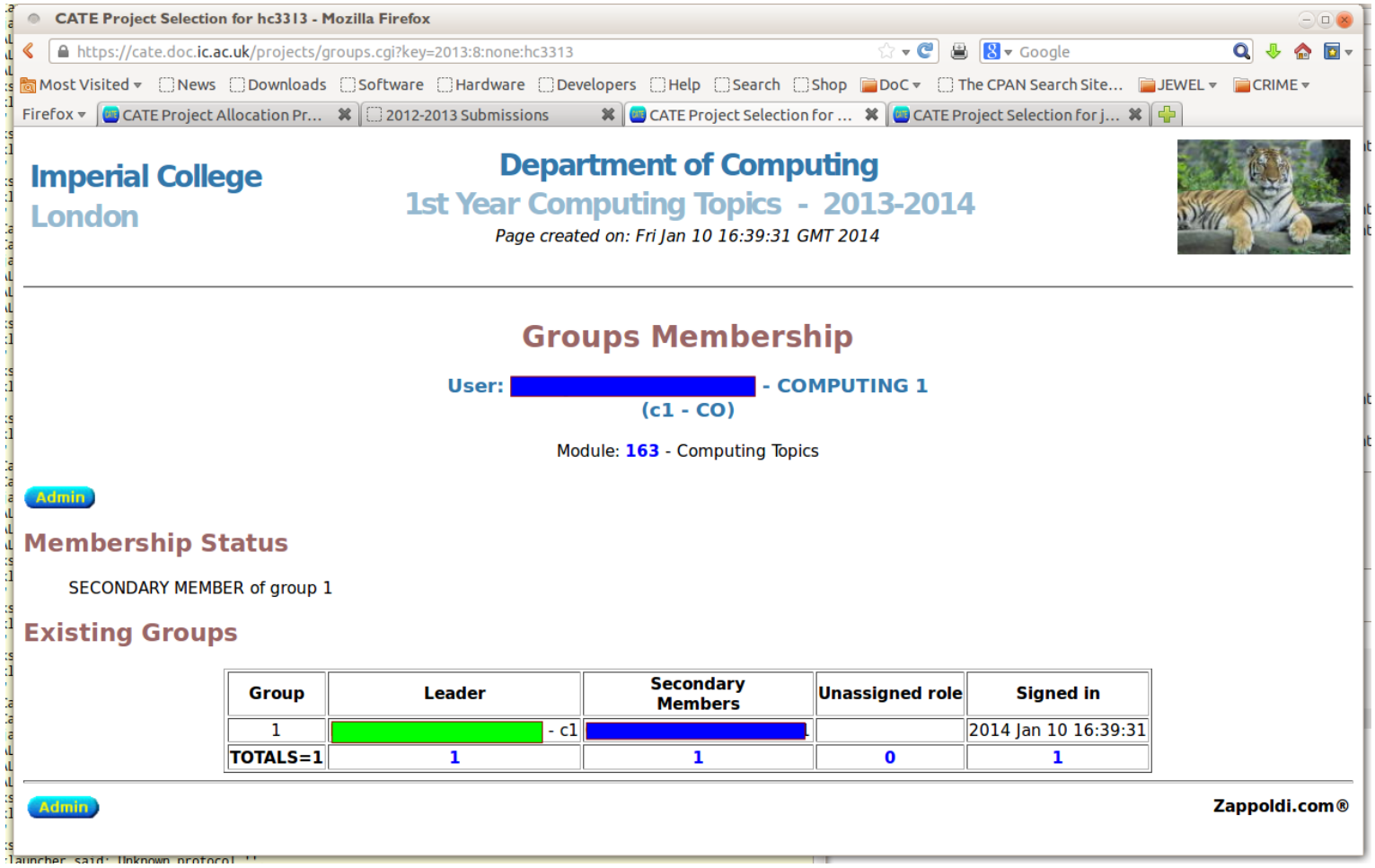

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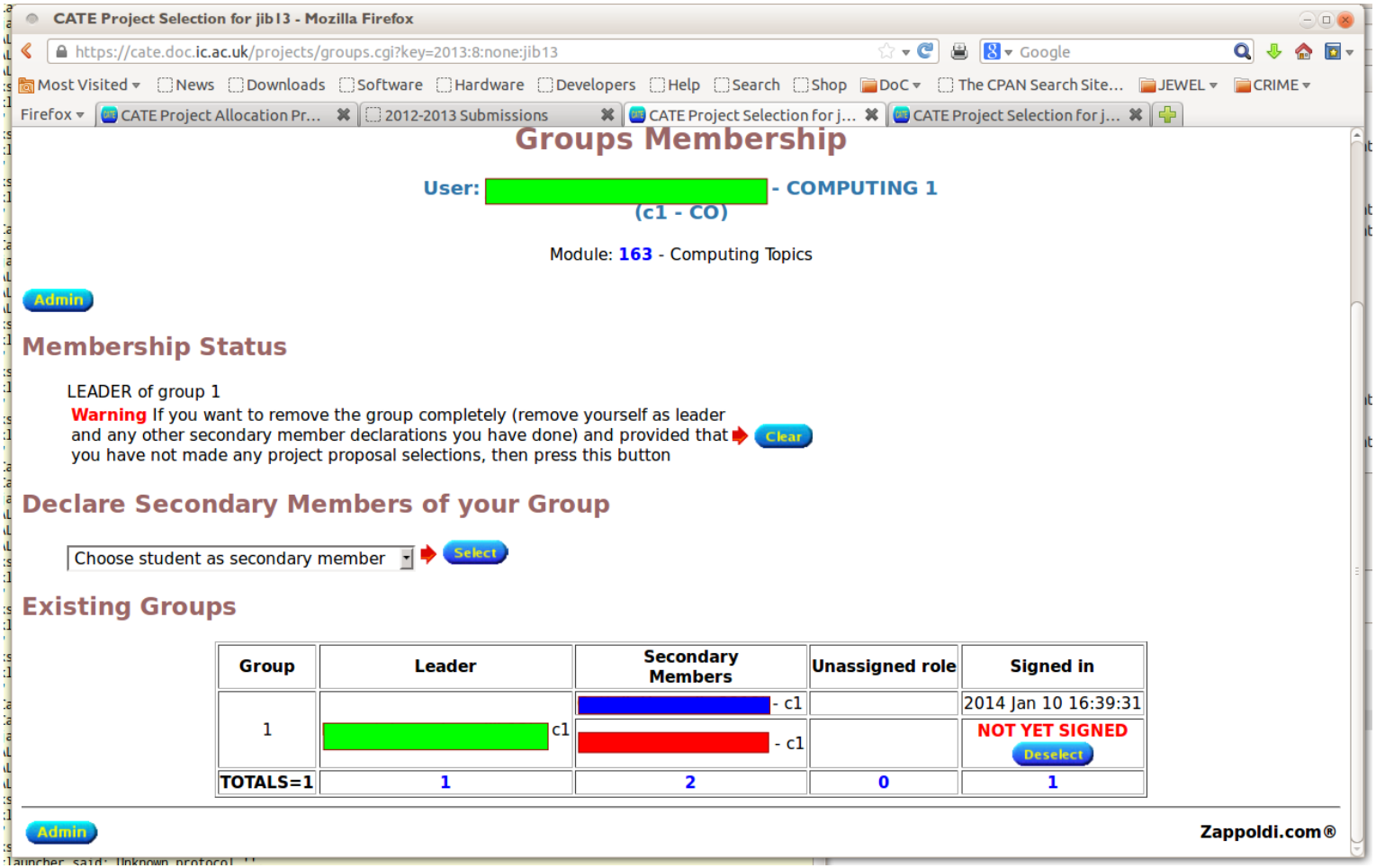
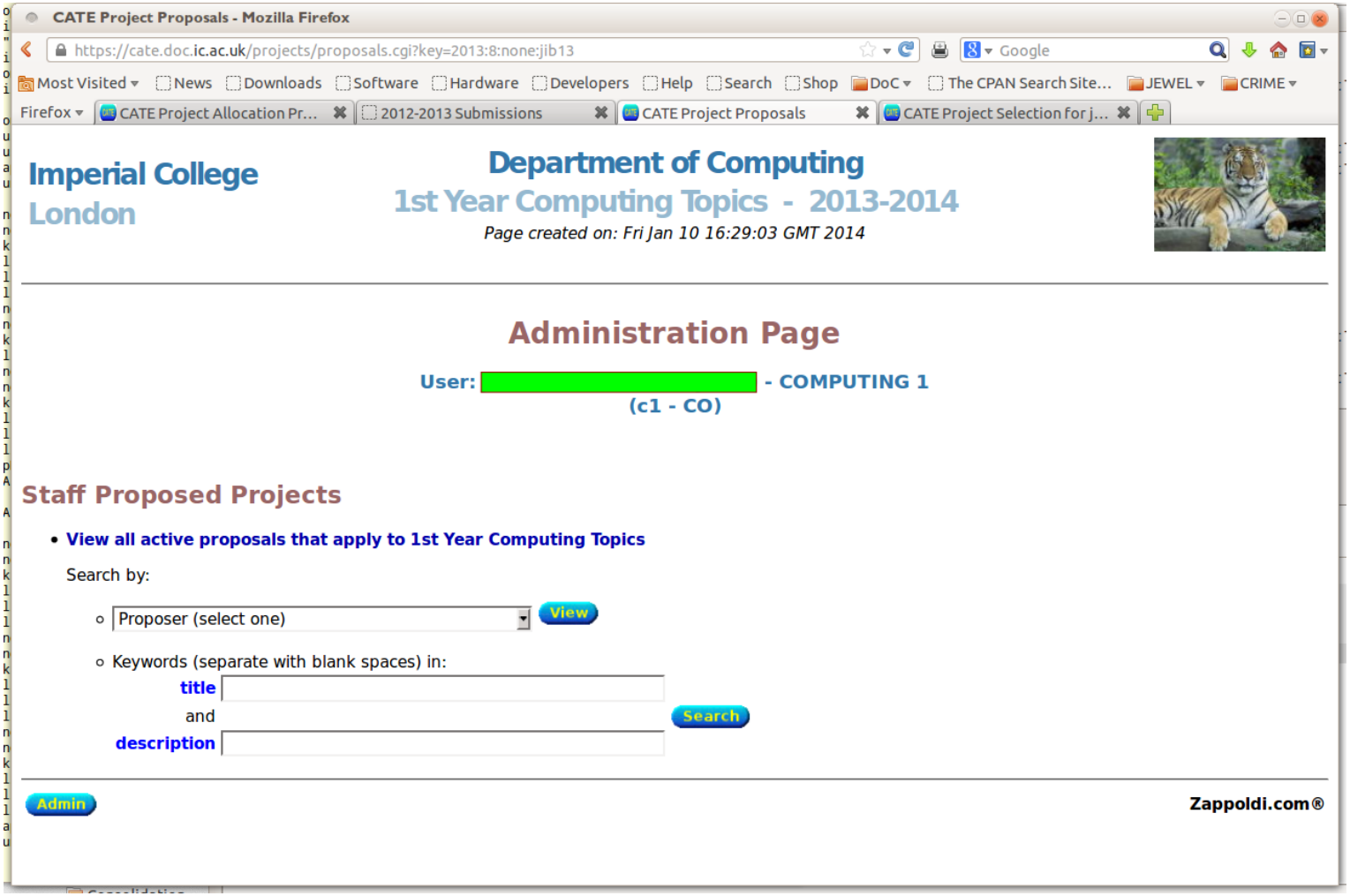


Select Topics



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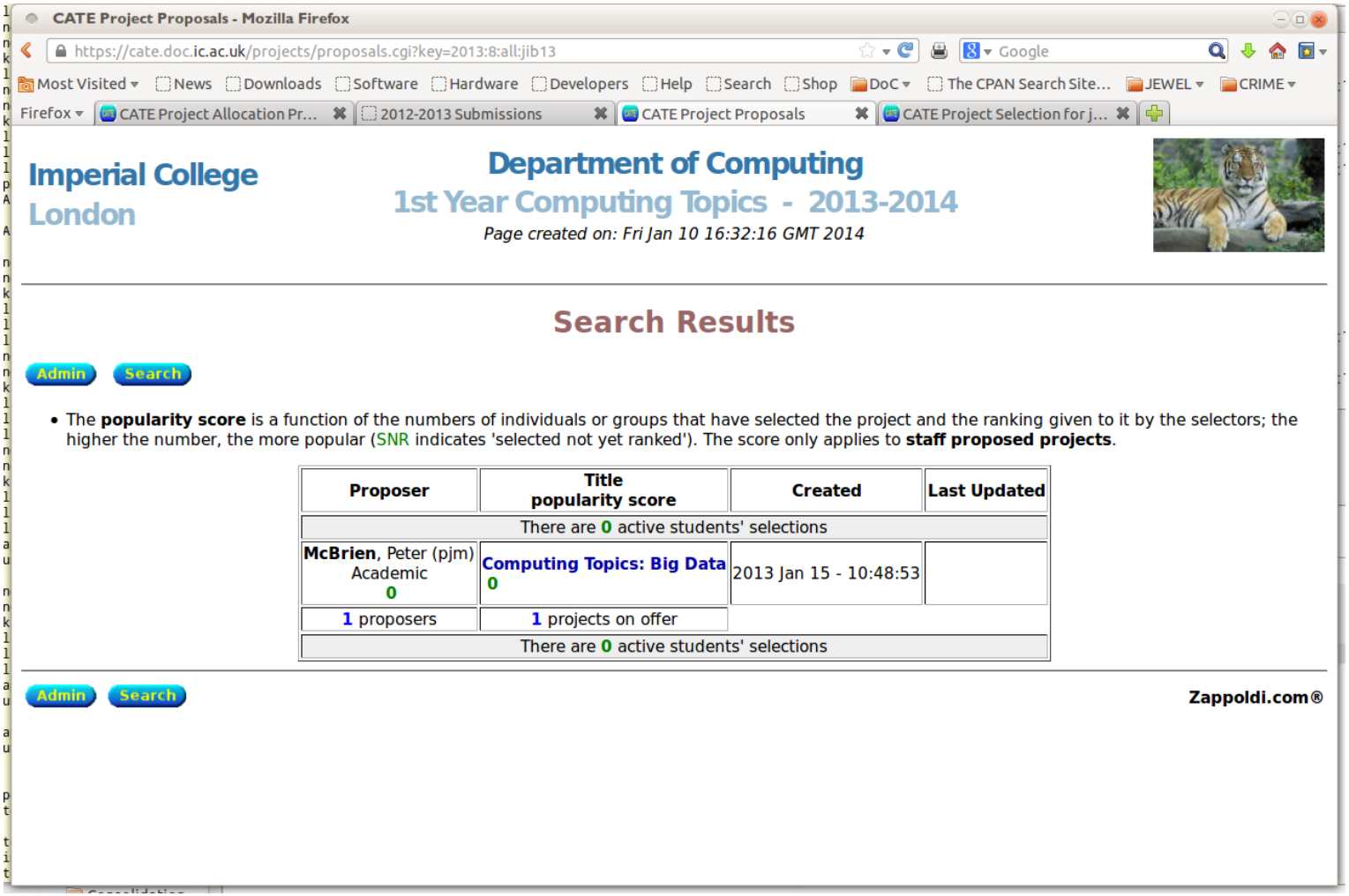

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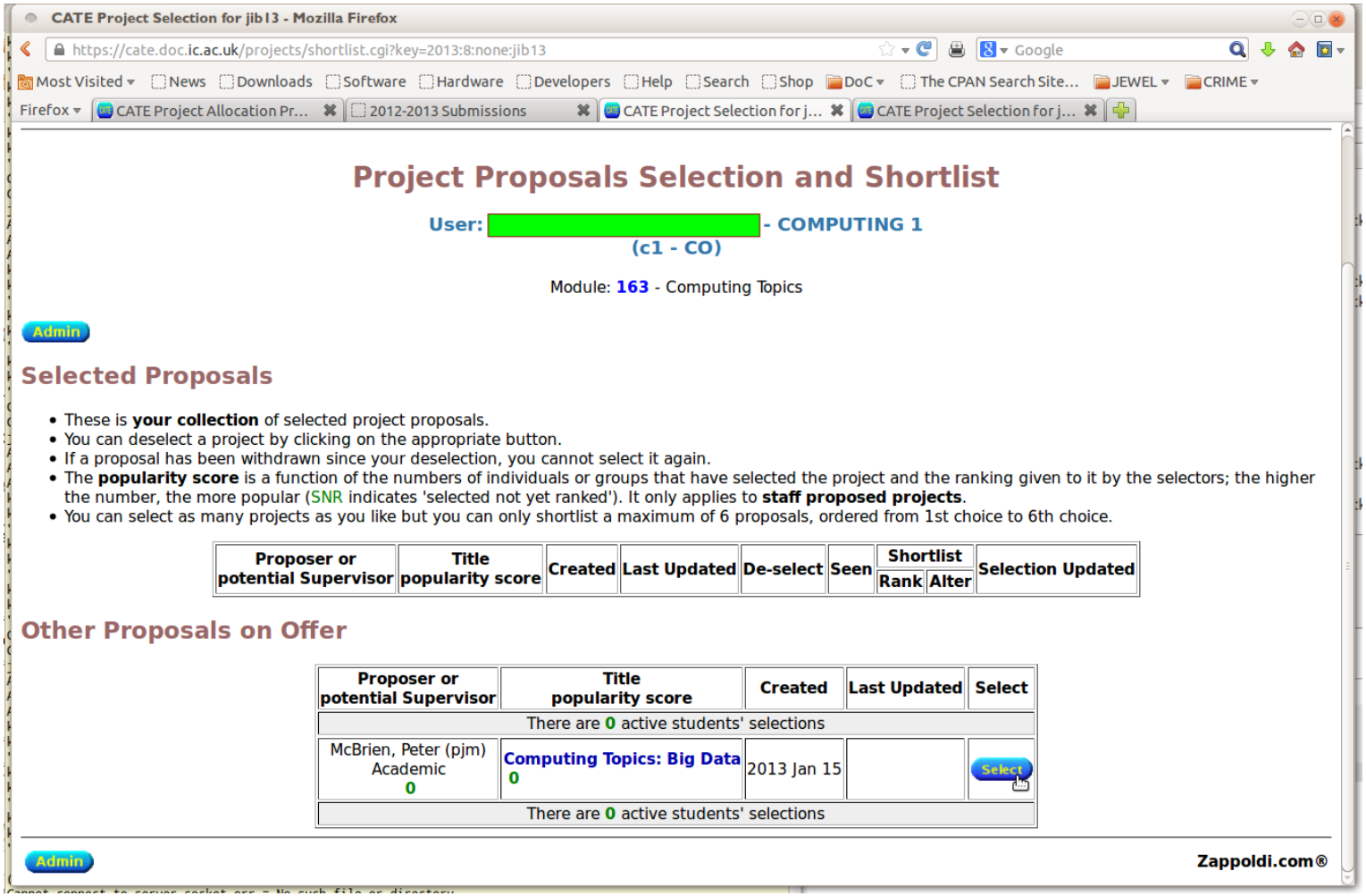

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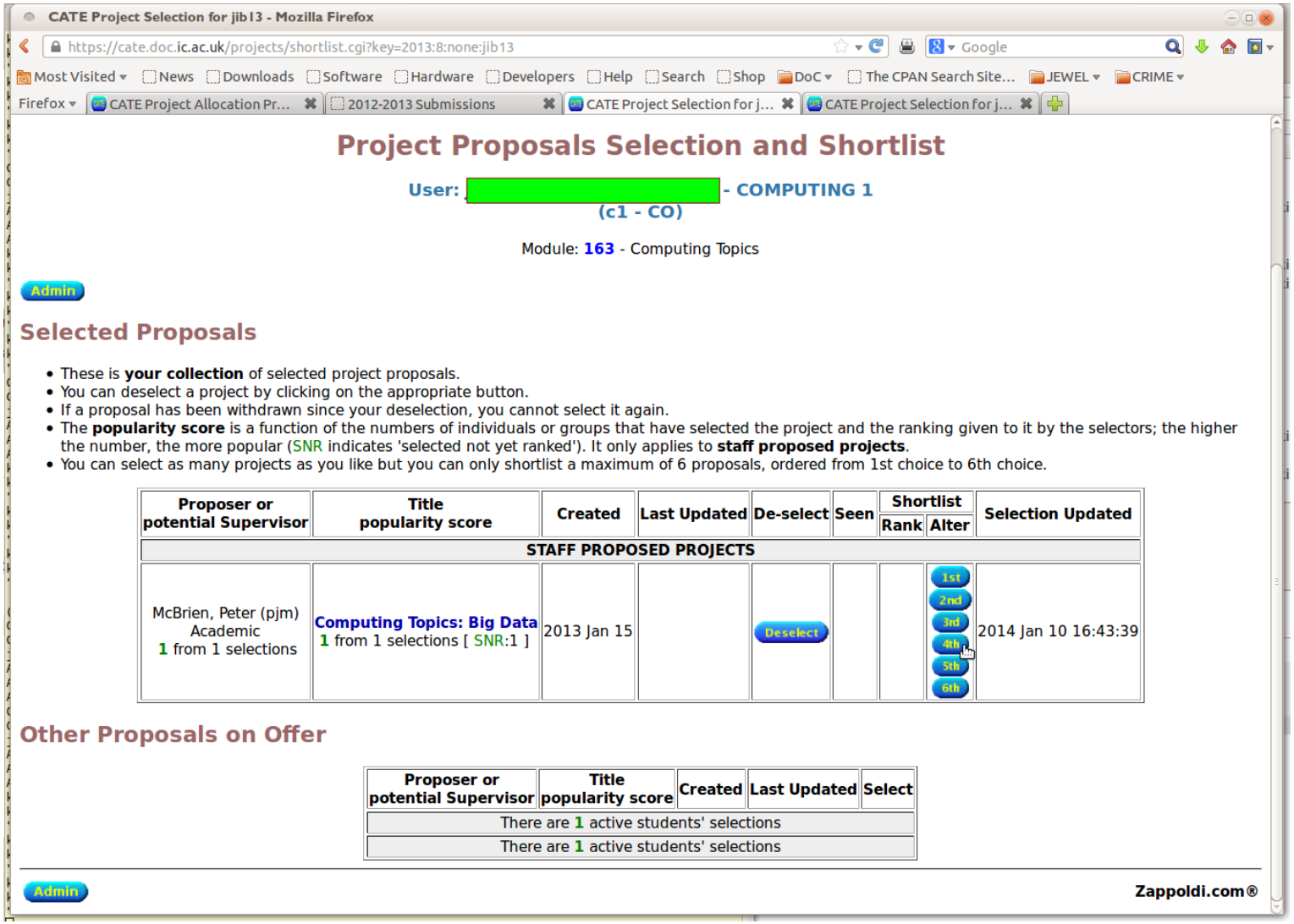

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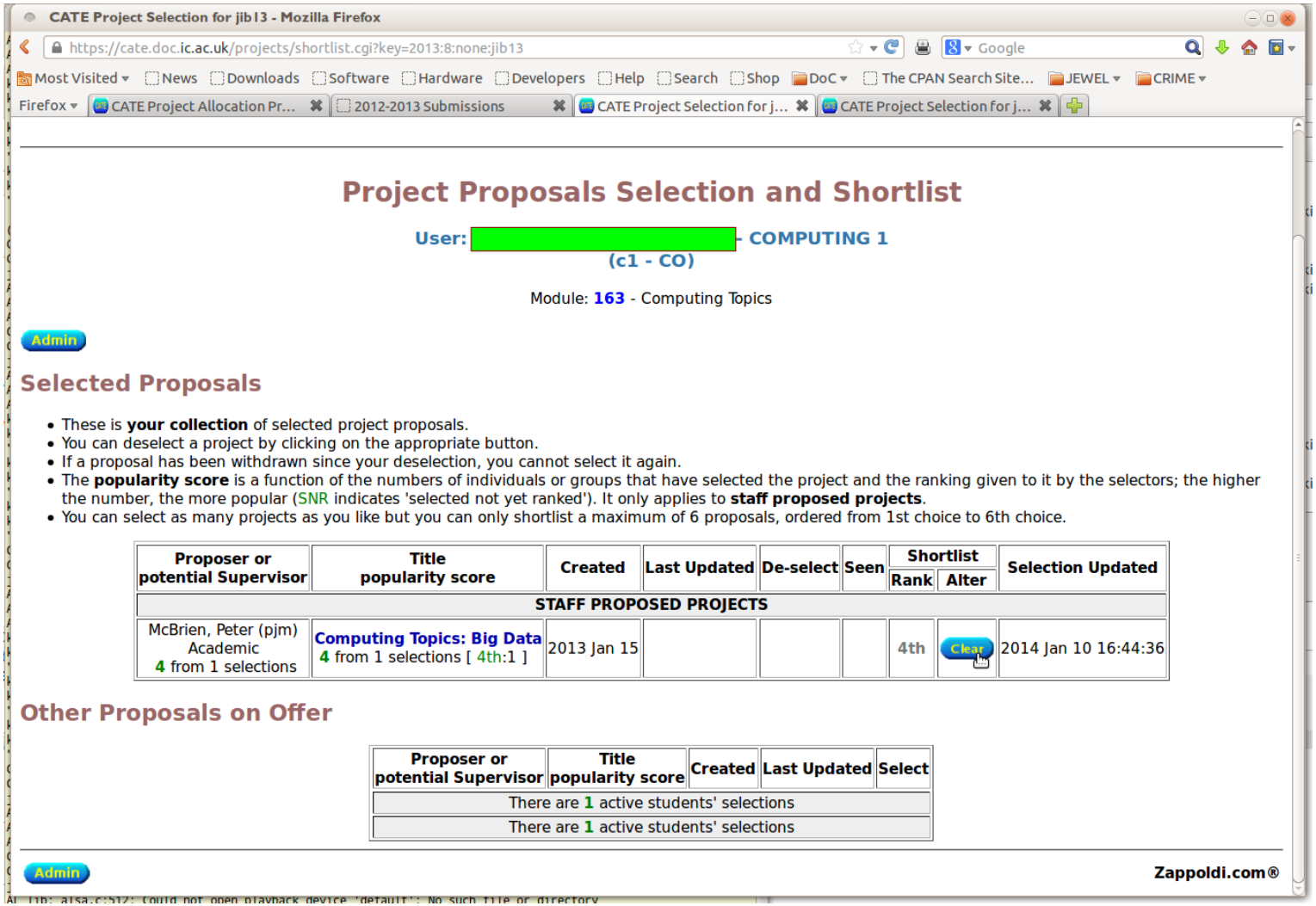

What is WebPA?

- ”WebPA is an open source online peer assessment tool that enables every group member to recognise individual contributions to group work” [webpaproject.lboro.ac.uk]

7th Feb	Deadline WebPA First Team assessment
15th Mar	Deadline WebPA Final Team assessment

Topics Fest Day

The Topics Fest day will be organised in four parallel sessions of presentations with one talk on each topic. You should attend the whole day.

09.30-12.30	4 talks + coffee break (4 parallel sessions)
12.30-14.00	Lunch break (lunch will be provided)
14.00-17.00	4 talks + tea break (4 parallel sessions)
17.30-18.00	Announcement of the prize winners (There will be one prize per topic)

Timetable for 2015

15th/16th Jan	Introductory talks
19th Jan	Deadline for group and topic requests
21st Jan	Groups and topics will be published
23rd Jan	Initial meeting with supervisors
6th Feb	Deadline WebPA First Team assessment
13th Feb	Optional progress meeting
6th Mar	Optional progress meeting
14th Mar	Deadline WebPA Final Team assessment
19th Mar	Hand in day for the web page
25th Mar	Hand in day for the presentation
26th Mar	Topics Fest (All day)

https://www.doc.ic.ac.uk/~mvalerae/firstyear/pages/secure/topics/IntroSchedule.html