



How to start your GP

Shady S. Khalifa

Assistant lecturer

Information Technology Department
Faculty of Computers and Information

Cairo University

sh.khalifa@fci-cu.edu.eg



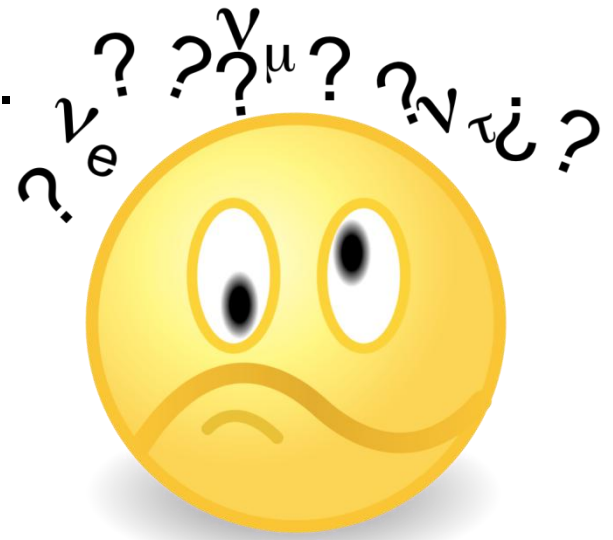
A Word of Caution



- This presentation is solely based on my point of view constructed from my experience as a student and a TA with a very little amount of reading on the matter

How to Choose Your GP idea??

- Explore your future.
- Discover your community needs.
- Satisfy your curiosity.



- That is how you get YOUR Graduation Project idea!

Explore your



- Where do you see yourself 10 years from now???

	University Professor	System Architect	System Administrator or Consultant	Project Manager or Company Owner	Quality Control Architect
Track	Research	Technical	Administration	Business	Testing
Main GP Idea	Exploring the hot research topics	Explore the best software engineering practices and top notch programming technologies	Explore the Network, DB and/or Linux and Windows administration and their configurations using scripts	Explore Time and Resource management practices and develop tools for assistance	Explore the best test engineering practices and top notch test automation tools
GP Objective	Find an interesting point for your MSc studies	Get to know the best ways to design and implement a system + learn a bunch of programming tools	Get familiar with Linux scripting and administration + learn a bunch of scripting tools	Get familiar with ways to manage resources + learn a bunch of resource management tools	Get to know the best ways to design a testing plan and test a system + learn a bunch of test automation tools

Explore your



- After finishing your GP

	University Professor	System Architect	System Administrator or Consultant	Project Manager or Company Owner	Quality Control Architect
Track	Research	Technical	Administration	Business	Testing
You need to Know	<ul style="list-style-type: none"> -Matlab - C++ (OOP) - C# or Java - Linux scripting 	<ul style="list-style-type: none"> -DB design &ERD -UML -C# or Java (OOP) - ASP.net or J2EE - HTML & JS - PHP & Python -Unit testing - Profiling tools 	<ul style="list-style-type: none"> -Linux dministration -Linux Shell Script -Python -Perl 	<ul style="list-style-type: none"> - ERP Systems 	<ul style="list-style-type: none"> -Different types of testing. -Available test automation tools -Test planning - Scripting language (python, Perl, Ruby) -HTML & JS
Hot Topics	<ul style="list-style-type: none"> -Semantic Web - Internet of Things -GPGPU -Cloud Computing -Virtualization -Big Data 	<ul style="list-style-type: none"> -Java (I'm a Java guy .D) -GWT -EJBs -Seam -Spring -Hibernate -Struts -JUnit -Jprofiler - Python 	<ul style="list-style-type: none"> -Information Storage and Management -Backup and Recovery -System Security - Provide a solution to solve an existing problem 	<ul style="list-style-type: none"> -Check OpenERP (I'm no expert in this area .D) - Add new functionalities to it. 	<ul style="list-style-type: none"> -Check Watir and Selenium - Check load testing tools - Add new functionalities to any of them.

Discover your



- Your GP must **serve a community need**.

- The community could be

- The pharmacists
- The teachers
- The programmers
- The testers
-




- Your GP must **be sellable**. You need to ask yourself how I will be able to sell my GP idea to the community and to the GP committee ?

- Use **Open Source** and give back to the community by contributing your code.

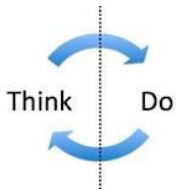
Satisfy your Curiosity



- The Graduation Project is
 - an independent, personalized learning experience,
 - designed to give you an authentic opportunity to direct your own learning.
 - ensures high expectations , personalizes learning through the use of small advisory groups, and links students, teachers, and members of the outside community in a common academic goal.



- You have the opportunity to demonstrate problem-solving, self-directed learning, decision-making, and independent research while investigating a specialized area of interest.



How to Get Sponsored Today



- **Before** considering looking for a sponsor, you need to answer this question: **What do I need to buy?**
 - You need creative ideas and these can be generated by talking to people.
 - Projects that include buying HW may include:
 - Buying Mobile phones, robot kits, cameras, authentication devices for fingerprint reading or iris reading, readers like RFID and tags, sensor networks, embedded boards, etc.
- You need to submit a **well-written well-thought** proposal to win a sponsorship as you are competing with lot others.
 - Each sponsoring entity has its own proposal format which you must use, so start looking for the entity you want to sponsor your GP and write your GP proposal in their format.
- **Advantages from this experience:**
 - do something exciting
 - work on real equipments
 - interface with the industry/world
 - get more credit and better grades
 - get visibility and write in your CV that your GP was funded which is translated to “This project was great and creative”
 - open links with the funding entity for startup funding, etc
 - do a favor to FCI and get us equipment for other students to use in the upcoming years

ITIDA Funding



- ITIDA spends 1100,000EGPs on funding 110 projects a year (up to 10,000EGPs each) in their **Information Technology Academia Collaboration (ITAC)** Program.
- You **can** use this fund to buy **specialized** HW/SW/Training or books.
- You **cannot** buy Laptops/PC/Printer, etc
- **A major drawback** in ITIDA is that
 - Submission is by **31 Jan**
 - Money received in **April/May**
 - **Time is really tied** since you get money **very late**, and you still need to buy the equipments and do the project.
 - **Still**, if you do **careful planning**, work on a simulator or other equipment somewhere else till you get yours, **you can manage**.

ITIDA Useful Links

- Information on Sponsoring GPs
 - <http://www.itida.gov.eg/En/OurPrograms/ResearchInnovation/ITAcademiaCollaboration/Pages/Graduation.aspx>
- ITAC Program Flyer
 - <http://www.itida.gov.eg/Documents/Graduation%20Projects%200Flyer%20General%202012.pdf>
- Funding Guidelines
 - <http://www.itida.gov.eg/Documents/Graduation%20Project%20Financial%20Guidelines%20April%202012.pdf>
- Applying Guidelines (checklist, form, proposal)
 - <http://www.itida.gov.eg/En/OurPrograms/ResearchInnovation/ITAcademiaCollaboration/Pages/Guides.aspx>
- List of 2011-2012 accepted GPs
 - <http://www.itida.gov.eg/Documents/Accepted%20Graduation%20Projects%202011-2012.pdf>

Questions?

