Review Protocol

1. **Background:**

This is my Master Thesis and I want it to be appropriate written.

1. **The research questions that the review is intended answer:**

* What is IoT?
* What is Security Risk Management?
* What is IoT Reference model?
* How to find vulnerability and attack the system through it?
* What is existing practice of monitoring and covering vulnerabilities in IoT systems?

1. **The search strategy:**

* What are the review’s objectives?

The review objectives are:

* + Cover the theory part of the thesis (Answer the questions: “What is IoT?”, “What is Security Risk Management?”);
  + Collect and summaries the existing knowledge in securing IoT systems;
  + Reach deep understanding of the field to be able make your own contribution.
* What sources were searched to identify primary studies? Were there any  restrictions?
  + The main source – <https://link.springer.com/>
  + Additional sources - <https://academic.microsoft.com/> , <http://www.sciencedirect.com/>
  + The main restriction which I applied was that the primary studies should be connected to problem of securing IoT systems. (Keywords: threats, risks, security, vulnerabilities, Internet of Things, reference model, risk management etc).

1. **Study selection criteria and procedures:**

* What were the inclusion/exclusion criteria and how were they applied?
  + Inclusion – I liked the abstracted and thought that the article/book/research will be useful/interesting for me.
  + Exclusion – I did not like the abstract.
* How were the data extracted from the primary studies?
  + To extract data, I am planning to read each written work (part of it), highlight the key massages and summarize them in my own words (How did I understand them).
* Based on data extraction I can also exclude some primary studies if there are no valuable key massages.

1. **Study quality assessment checklist and procedures:**

* Vocabulary quality (Is it easy to follow the text in the paper?)
* Structure quality (Is it easy to navigate through the paper?)
* Are the author’s arguments supported with the experiment results or real practice?

1. **Data extraction strategy**

* How were the data extracted from the primary studies?

To extract data, I am planning to read each written work (part of it), highlight the key massages and summarize them in my own words (How did I understand them).

1. **Synthesis of the extracted data**

Do not sure if I have to perform a formal meta-analysis

1. **Project timetable**

List of papers:

* + “Study of Security Issues in Pervasive Environment of Next Generation Internet of Things”
  + “Scanning for Vulnerable Devices in the Internet of Things”
  + “Securing the Internet of Things”
  + “Monitoring and Security for the Internet of Things”
  + “Management platform of threats information in IoT environment”
  + “IoT Reference Model”
  + “Information Security”