

Project Outline

Project Title:

Threat modelling framework for micro businesses

Background:

Micro businesses (businesses with 9 or less people) lack the cyber security expertise needed to use existing threat modelling frameworks and take necessary precautions against cyber threats. These study aims to create a non-technical threat modelling framework and a web-based threat-modelling tool to help micro businesses to model the threats against their businesses.

Research Question:

How can existing threat modelling frameworks can be incorporated into a non-technical framework so that micro businesses can model the cybersecurity threats they face in the absence of a cybersecurity expert?

Aim:

Design a non-technical threat modelling framework for micro businesses and a web-based threat modelling tool based on this framework.

Objectives:

- Conduct a literature review to explore the current state of research.
- Explore current threat modelling frameworks.
- Handpick aspects of threat modelling frameworks which would prove useful for micro businesses.
- Conduct a survey to explore how micro businesses approach cybersecurity.

- Design a non-technical threat modelling framework for micro businesses based on the research done.
- Design a web-based threat modelling tool for micro businesses.
- Conduct a second survey to validate the framework and the tool.

Methodology/Development strategy/Research Design:

Research and development will be conducted in 7 steps:

1. Literature review on the current state of research on cybersecurity in micro businesses.
2. An initial qualitative survey to explore how cybersecurity is handled in micro businesses and the pitfalls they encounter.
3. Analysis of the initial survey results and identification of the problem areas.
4. Identification of threat modelling frameworks that are relevant to micro businesses.
5. Designing a non-technical threat modelling framework based on the research done.
6. Designing a web-based threat modelling tool based on the framework.
7. Follow-up survey on how micro businesses perceive the new tool and assess its impact on business cybersecurity.

The artefact(s) that will be created:

1. A non-technical threat modelling framework for micro businesses.
2. A web-based threat modelling tool.

Proposed timeline:

