

ASSIGNMENTS

1. Crawl data from a website:

Assume that you want to access specific data on a website, i.e. you want to listen to mp3, you want to download ebooks from a website. [Write a program in PHP](#) (and other supporting languages if needed) to **create a crawler**, which has following characteristics:

- **Input** to the program:
 - Website domain name (or URL, or IP address)
 - File extension, i.e. pdf, mp3, ...
- Expected **output**:
 - A list of URLs to desired data, click on the links to access the data
 - A button for download all data.
- **Consider** the case **when data is protected by user password**.
 - Suggest a way to bypass the password to access mentioned data
- What to **submit**: compressed file (programming code + user guide + captured images).

2. Propose a way to detect **Deface Attack**:

You signed a contract with a website owner to provide a security service to the website. You focus just on the deface attack.

- Do research on **deface attack**.
- Propose a way to detect (automatically) deface attack if it happens to your website.
 - Write a program running on the web server to detect deface attack.
 - Suggest a way to detect deface attack *remotely*
- What to **submit**: compressed file (programming code + user guide + captured images).

3. **Session Hijacking** and countermeasure

- Do research on session-hijacking attack.
- Demonstrate this attack (if possible).
- Countermeasure.
- What to **submit**:
 - Description about Session-Hijacking attack.
 - Demonstration
 - How to prevent this attack?
 - Put all together in a compressed file, submit it to BK-EL

4. **Birthday Attack**

- Do research on Birthday Attack.
- How attackers apply this attack in document counterfeit
- Countermeasure.
- What to **submit**:
 - Description about Birthday attack.
 - Demostration
 - How to prevent Birthday attack?
 - Put all together in a compressed file, submit it to BK-EL

5. **SQL Injection** and countermeasure

- Do research on SQL Injection attack.
- Demonstrate this attack.
- Countermeasure.
- What to **submit**:
 - Description about SQL Injection attack.
 - Demonstration
 - How to prevent this attack?
 - Put all together in a compressed file, submit it to BK-EL