Questions

Please answer the following questions. Your answers should appear in an Answers.pdf file:

1. How can we enhance the backend to have faster performance for frequently accessed "short URLs"?

2. How can we enhance the implementation to have one "short URL" redirect to a few "long URLs", based on redirect percentage? For example: for http://localhost/sh54

a. 30% of the redirections will go to www.somethingverylong.com/1234.html

b. 70% of the redirections will go to www.somethingverylong.com/3456.html

3. How can we enhance the implementation to report the top 5 redirected URLs in the last hour?
4. How can we prevent an attack, in which a malicious client fills the database with millions of URL redirections?

5. What happens after the user presses the "Create short URL" button? Please detail as much as possible.