

SPPU-BE-COMP-CONTENT - KSKA Git

Q1. what is the purpose of captcha Technology and how does it work?

Ans.

→ Purpose:

- CAPTCHA (Completely Automated Public Turing Test to tell computers and Humans apart) is a type of security measure known as challenge-response authentication.
- It is a test to determine whether the user is human or not.

→ Working:

- A CAPTCHA works by asking end users to perform some task that a software ^{bot} cannot do.
- It is made up of 2 simple ~~two~~ parts: a randomly generated sequence of letters and/or numbers that appear as a distorted image and a text box.
- To pass the test and prove your human identity, simply type the characters you see in the image into the text box.
- Quite simply, CAPTCHA works by asking end users to perform some task that a software bot cannot do.
- If the user can do the task correctly, it provides authentication to the service that the user is a human being and not a spambot and allows the user to continue.
- Tests often involve JPEG or GIF images because while bots can identify the existence of an image.

Q2. How attackers defeat CAPTCHA's?

Ans. Following are the ways of defeating CAPTCHA:

1) AI:

- This approach includes downloading hundreds of example images to train the system because we ~~don't~~ don't have access to the source code and then releasing the trained AI on the system.

2) CAPTCHA hacking strategies

- using optical character recognition (OCR) to read the characters on the screen.
- Checking how many images are being used and detecting them with MD5.

3) Security bugs

- web apps using reCAPTCHA have to create the request in a specific way, and sometimes, ~~there~~ the request is insecure.
- when this happens attackers can bypass the reCAPTCHA every single time.

4) Botnets

- massive botnets comprising thousands of compromised machines can be leveraged to slowly solve CAPTCHA's over time through brute force.
- It's like having an army of robots working for you.

→ Conclusion:

- Thus, we have implemented image captcha successfully.