



In this stage, you'll extend your DNS server to respond with the "question" section, the second section of a DNS message.

## Question section structure

The question section contains a list of questions (usually just 1) that the sender wants to ask the receiver. This section is present in both query and reply packets.

Each question has the following structure:

- Name: A domain name, represented as a sequence of "labels" (more on this below)
- **Type**: 2-byte int; the type of record (1 for an A record, 5 for a CNAME record etc., full list <a href="here">here</a>)
- Class: 2-byte int; usually set to 1 (full list <a href="here">here</a>)

<u>Section 4.1.2</u> of the RFC covers the question section format in detail. <u>Section 3.2</u> has more details on Type and class.

## Domain name encoding

Domain names in DNS packets are encoded as a sequence of labels.

Labels are encoded as <lenath><content> . where <lenath> is a single byte the