Video 4.2

Node.js Request and Response Objects

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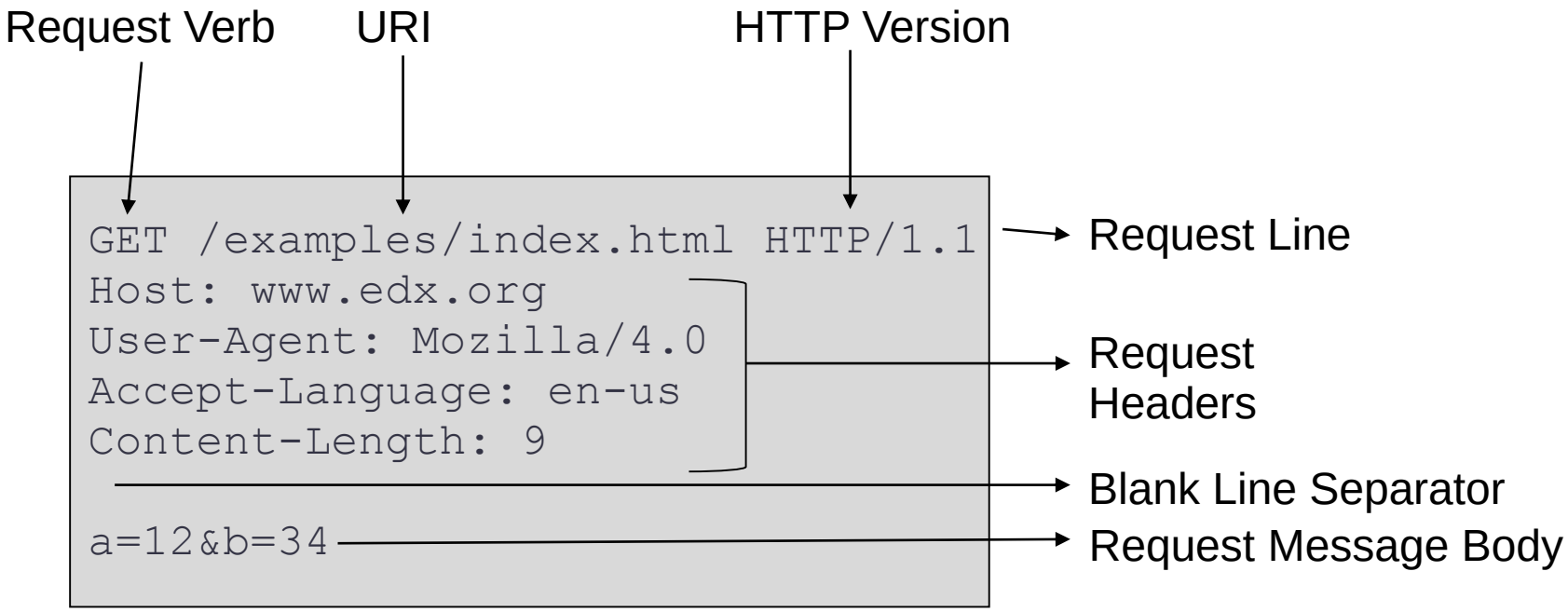
Review

- Web browsers communicate with Web servers via HTTP requests and responses

- Node.js and Express simplify the development of Web servers to handle HTTP requests and create and return HTTP responses

Anatomy of an HTTP Request



Node.js/Express Request Objects

- An HTTP Request is represented as an object in the Express app
- The object is passed as a parameter to the callback function/event handler

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var express = require('express');
var app = express();

app.use('/', (req, res) => {
  res.send('Hello World!');
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app.listen(3000, () => {
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Request Object Properties/Functions

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  var method = req.method;
  var url = req.url;
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Request Object Properties/Functions

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- **`url`**: the resource that was requested
- **`headers`**: object containing all headers
- **`get(field)`**: request header field

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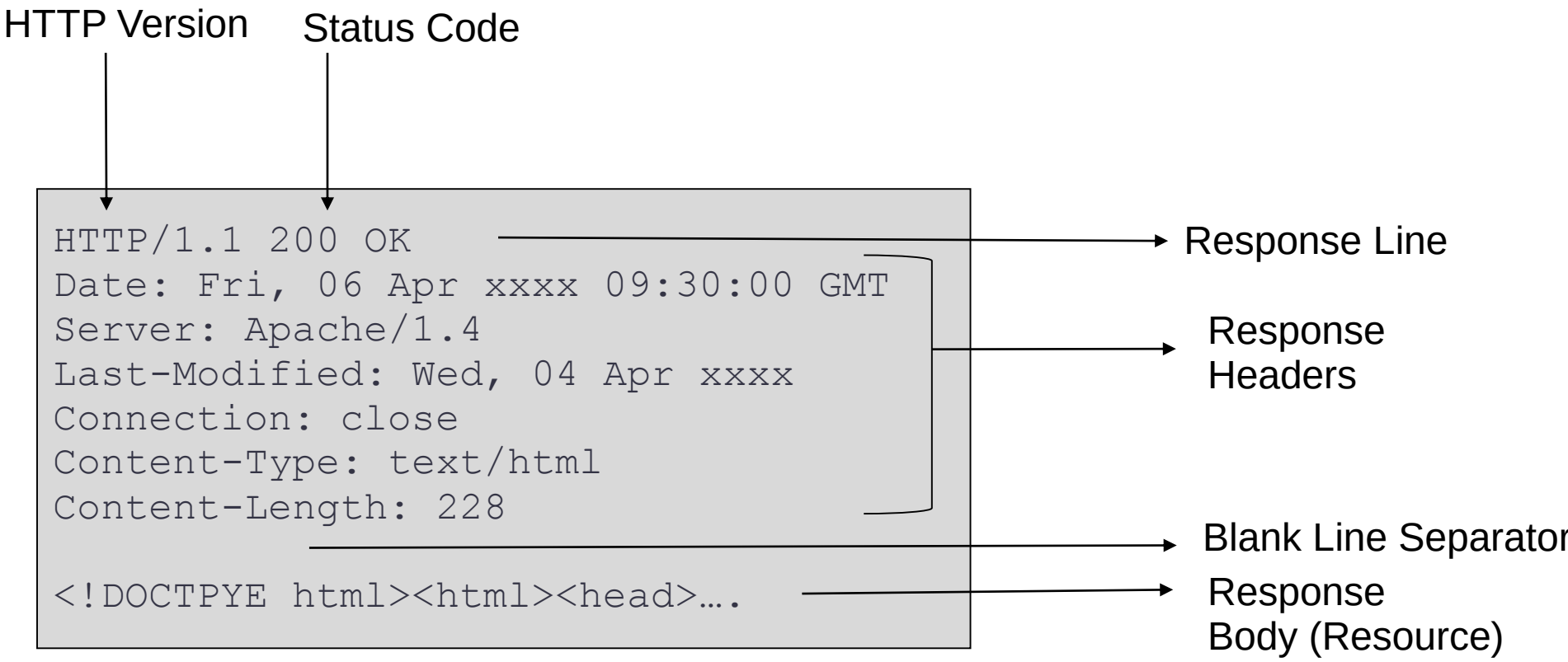
Anatomy of an HTTP Response



Node.js/Express Response Objects

- An HTTP Response is also represented as an object in the Express app
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Response Object Functions

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app.use('/', (req, res) => {

  res.status(200);
  res.type('html');
  res.write('Hello world!');
  res.write('<p>');
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Response Object Functions

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- **`type`**: set the HTTP content type
- **`write`**: add content to the body of the response
- **`end`**: send the response and close the connection

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Combining Requests and Responses

```
app.use('/', (req, res) => {

  var name = req.query.name; // e.g. /?name=devesh

  res.status(200).type('html');

  if (name) {
   res.write('Hi, ' + name + "it's nice to see you.");
  }
  else {
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Summary

- Node.js and Express represent HTTP requests and responses using JavaScript objects

- We can use these objects' properties and functions to dynamically generate the content that is sent in response to a request