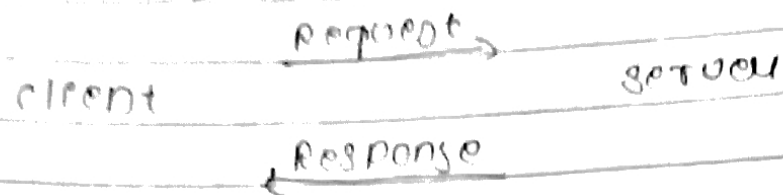
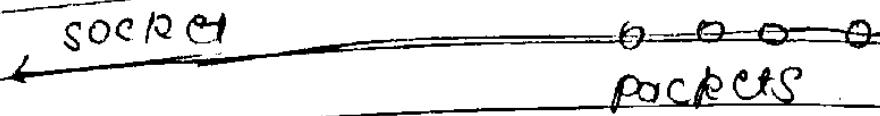


* clients & servers:



- Browser send the request to server and server handle the request and send the response to client.
which user
- protocols: a set of communication rules, that two side agree to use when communicating.
- Each computer of server identified by its own unique IP address
- If we want to connect client to server first we need to connect to IP address. then it open a socket b/w two computer which is channel that which information can be sent.
- we need different protocol to send
FTP :- file transfer protocol.
TP :- transfer protocol.
HTTP :- for website.

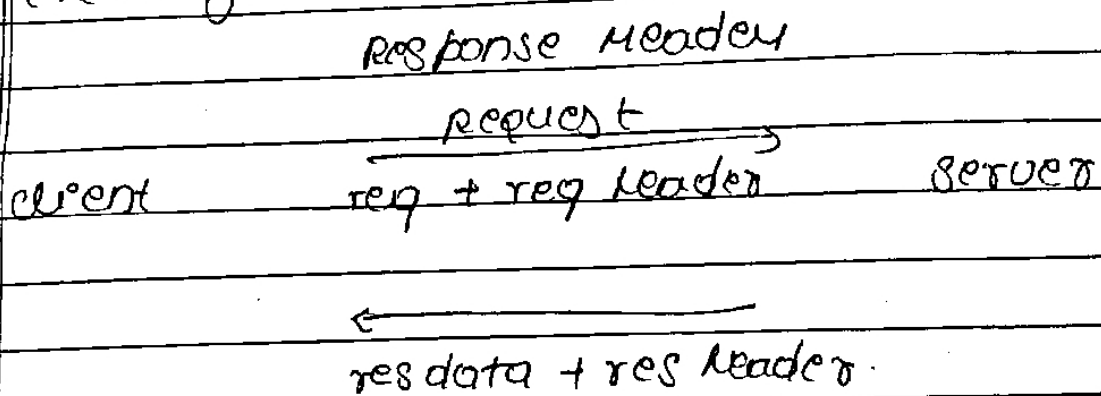
TCP



→ ports :

A program running on a computer can listen for requests sent to a particular port number.

creating servers :



Request Headers :-

- content-type :- telling about content to browser
- status :-

chunk is fragment of data that is sent to all the servers by the client.

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Streams & Buffers :-

- In node.js streams is required to handle and manipulate the streaming data like a video, a large file etc.
- Mainly used to transfer data.
- The streams module in node.js is used to manage all the streams.
- Syntax to access the stream module:
`const stream = require('stream');`
- The stream module is used to create new types of stream instances.

Types of Streams in Node.js :-

- (i) Readable streams :- (`fs.createReadStream`)
This stream is used to create a stream of data for reading.
- (ii) Writable streams :- (`fs.createWriteStream`)
This stream is used to create a stream of data to write. ex:- to write a large amt of data in file.
- (iii) Duplex streams :-
This stream is used to create a stream that is both readable and

available at the same time.

(iv) Transform streams:-

This stream is used to create a readable and writable stream, but the data in the stream can be modified while reading and writing to the stream.

Buffers :-

- Temporary storage spot for a chunk of data that is being transferred from one place to another.
- Transfers small chunks of data at a time.
- The size of buffer, once set, cannot be changed. A buffer is used to store byte.
- Three different ways to allocate a buffer using the Buffer API, which is used to create a new buffer, methods like `Buffer.from()`, `Buffer.alloc()`, `Buffer.allocUnsafe()` are used.

Pipes:

- readable-pipe() method is a readable stream is used to attach a writable stream to the readable stream.
- pushes all the data that readable stream have and attached to the writable stream.

Serving HTML Page:

- 1st create an html file.
- res.writeHead(200, { 'Content-Type': 'text/html' });
var myReadStream = fs.createReadStream(
--dirname + '/index.html');

Basic of Routing :

- It is way in which the client requests are handled by the app ends.
- There are two types of routing that are without framework, routing with framework.

The Node Package Manager (npm)

- go to www.npmjs.com then search for express and install the package.

});

- To install express : `$ npm install express`
To uninstall : `$ npm uninstall express`.

nodemon :

- It is a tool that helps developer Node.js based application by automatically restarting the node application when file changes in the directory are detected.

- To run app used nodemon app.js
- `npm install -g nodemon`.

- `npm install --save-dev nodemon`
// as a development dependency.