

Frontend

A demonstration of the frontend

Tab 1

Hi Ellen, here is the frontend of our mobile app;)

Explore [UI Components](#)

Tab 1

Tab 2

Tab 3

```
<ion-header [translucent]="true">
  <ion-toolbar>
    <ion-title>
      Tab 1
    </ion-title>
  </ion-toolbar>
</ion-header>

<ion-content [fullscreen]="true">
  <ion-header collapse="condense">
    <ion-toolbar>
      <ion-title size="large">Tab 1</ion-title>
    </ion-toolbar>
  </ion-header>

  <app-explore-container name="Hi Ellen, here is the frontend of our mobile app;"></app-explore-
</ion-content>
```

```
//This is our very first method to perform a POST request
initStreaming(message_size) {
  //start an empty payload
  let payload = "";
  //load payload with specified amount of bytes(message_size)
  for(let i=0; i <message_size ; i++){
    payload = payload + "0";
  }

  //Angular expected headers
  const requestOptions = {
    headers: new HttpHeaders({
      'Content-Type': 'application/json'
    })
  };

  //Our payload data that will be sent to the server
  let postData = JSON.stringify({"woah":payload});
  //the Angular post method (URL , payload, http headers)
  this.http.post("http://localhost:8081/upload", postData, requestOptions)
    .subscribe(data => {
      //should receive data here from the server;
      console.log(data);
    }, error => {
      console.log(error);
    });
}
```

Server.js

A simple demonstration of uploading file from mobile app to the server for testing upload speed

```
//This is our very first method to perform a POST request
initStreaming(message_size) {
  //start an empty payload
  let payload = "";
  //load payload with specified amount of bytes(message_size)
  for(let i=0; i < message_size ; i++){
    payload = payload + "0";
  }

  //Angular expected headers
  const requestOptions = {
    headers: new HttpHeaders({
      'Content-Type': 'application/json'
    })
  };

  //Our payload data that will be sent to the server
  let postData = JSON.stringify({"woah":payload});
  //the Angular post method (URL , payload, http headers)
  this.http.post("http://localhost:8081/upload", postData, requestOptions)
    .subscribe(data => {
      //should receive data here from the server;
      console.log(data);
    }, error => {
      console.log(error);
    });
}
```

Server receives payload
as input from frontend

```
// This responds a POST request for the homepage
app.post('/upload', function (req, res) {
  //if set to start experiment
  if(start){
    //save start time
    start_time = registerTime();
  }

  //collect bytes from app
  size = size + req.body.length;

  //if reached expected bytes
  if(size >= one_megabyte){
    //register end time
    end_time = registerTime();
    //calculate speed
    upload_speed = (size) / (end_time - start_time);
  }

  //send response to app
  res.send(upload_speed);
})
```

Initial App Wireframe

Download	~ Mbps
Upload	~ Mbps
Latency	~ ms
Jitter	~ ms
packet loss	~ %

Network quality

Data

Settings

Hi. pernet.

Select

delete all

Q

D

S

Hashmap.

of reported data
(money saved).

Q

D

S

Incentive: discount on
data plan based
on # of reported data.