

Survivors REST API Guidelines

1. Software Requirement Installation Guidelines

a. NodeJs (server side)

- i. Go to <https://nodejs.org/en/download/> to download for server side set up.

b. Postman (client side)

- i. Go to <https://www.postman.com/downloads/> to download for client side set up.

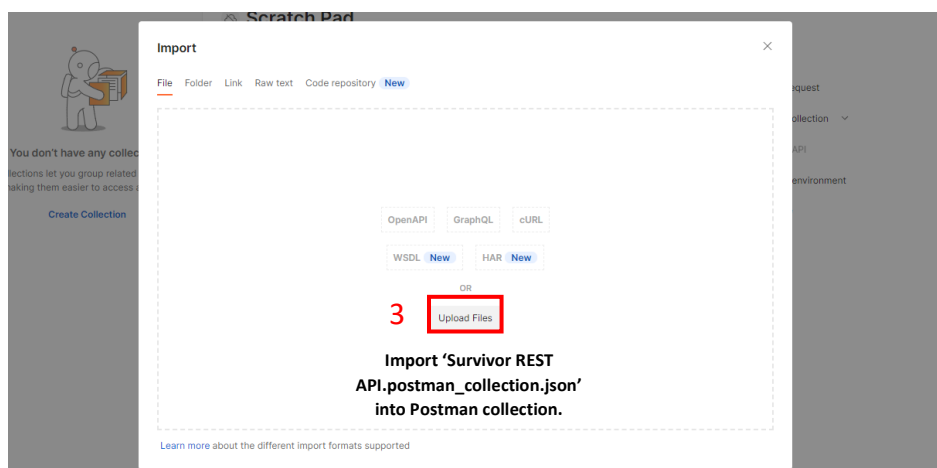
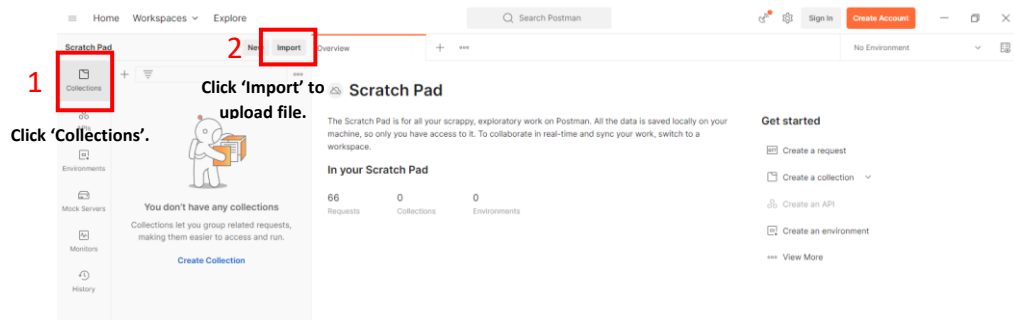
2. Server Side

a. Installation Set up

- i. Open Command Prompt/Terminal and clone <https://github.com/Skyman1208/Survivors-REST-API>.
- ii. Go to the directory and install all packages by 'npm install'.
- iii. 'npm run app' to active the SURVIVOR server.

3. Client Side

a. Load Test Script



b. API Testing

i. Add New Survivor

The screenshot shows a REST client interface with a sidebar on the left containing a tree view for 'Survivor REST API' with items: 'POST Add New Survivor' (selected), 'PATCH Update Location', and 'GET Infected Reports'. The main panel displays a POST request to 'http://localhost:3000/survivors/registration'. The 'Body' tab is active, showing a JSON payload in a code editor:

```
1 {
2   "name": "Vishnu Rashi",
3   "age": "43 years old",
4   "gender": "Feale",
5   "lastLocation": {
6     "lat": 2.3822,
7     "lng": 102.2116
8   },
9   "inventory": [
10  ]
11 }
```

Buttons for 'Send', 'Cookies', and 'Beautify' are visible on the right.

ii. Update Location

The screenshot shows the same REST client interface. The 'PATCH Update Location' item is now selected in the sidebar. The main panel displays a PATCH request to 'http://localhost:3000/survivors/1035c8ca-fc02-4ad5-b24d-d5055e5ec56b'. The 'Body' tab is active, showing a JSON payload in a code editor:

```
1 {
2   "lastLocation": {
3     "lat": 3.1555,
4     "lng": 101.7123
5   }
6 }
```

Buttons for 'Send', 'Cookies', and 'Beautify' are visible on the right.

iii. Infected Reports

Infected Reports are based on survivors' location where infected survivors are out of radius of safe zone consider infected.

```
function determineInfectStatus(coord) {
  // calculation of between current location and safe area
  safeCoord = {lat: 2.257710, lng: 102.252990}; // safe location

  // var R = 6.371; // km
  var R = 6371; // Radius of the earth in km
  var dLat = (coord.lat - safeCoord.lat) * (Math.PI/180); // deg2rad below
  var dLon = (coord.lng - safeCoord.lng) * (Math.PI/180);
  var a =
    Math.sin(dLat/2) * Math.sin(dLat/2) +
    Math.cos(safeCoord.lat * (Math.PI/180)) * Math.cos(coord.lat * (Math.PI/180)) *
    Math.sin(dLon/2) * Math.sin(dLon/2);
  var c = 2 * Math.atan2(Math.sqrt(a), Math.sqrt(1-a));
  var d = R * c; // Distance in km

  infectStatus = "No";
  if(d > 5) { // Safe area in 5KM radius from safe are location
    infectStatus = "yes";
  }

  return infectStatus;
}
```

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Survivor REST API

POST Add New Survivor

PATCH Update Location

GET Infected Reports

Survivor REST API / Infected Reports

GEThttp://localhost:3000/survivors/reports

Send

ParamsAuthorizationHeaders (6)BodyPre-request ScriptTestsSettingsCookies

Query Params

KEY	VALUE	DESCRIPTION	Bulk Edit
Key	Value	Description	

BodyCookiesHeaders (8)Test Results

Status: 200 OKTime: 58 msSize: 1.45 KBSave Response

PrettyRawPreviewVisualizeJSON

```
1  {
2    "status": "OK",
3    "reports": {
4      "Percentage of infected survivors": "0.00",
5      "Percentage of non-infected survivors": "100.00"
6    },
7    "data": [
8      {
9        "name": "Ali Bin Abu",
10       "age": "24 years old",
11       "gender": "Male",
12       "survivorInfectStatus": "No",
13       "lastLocation": {
14         "lat": 3.158,
15         "lng": 101.7123
16       },
17       "inventory": [
18         "Car",
19         "Bottle"
20       ],
21       "id": "70a5c3ef-aa41-43a7-b7a9-7a750f8a9a70"
22     }
23   ]
24 }
```