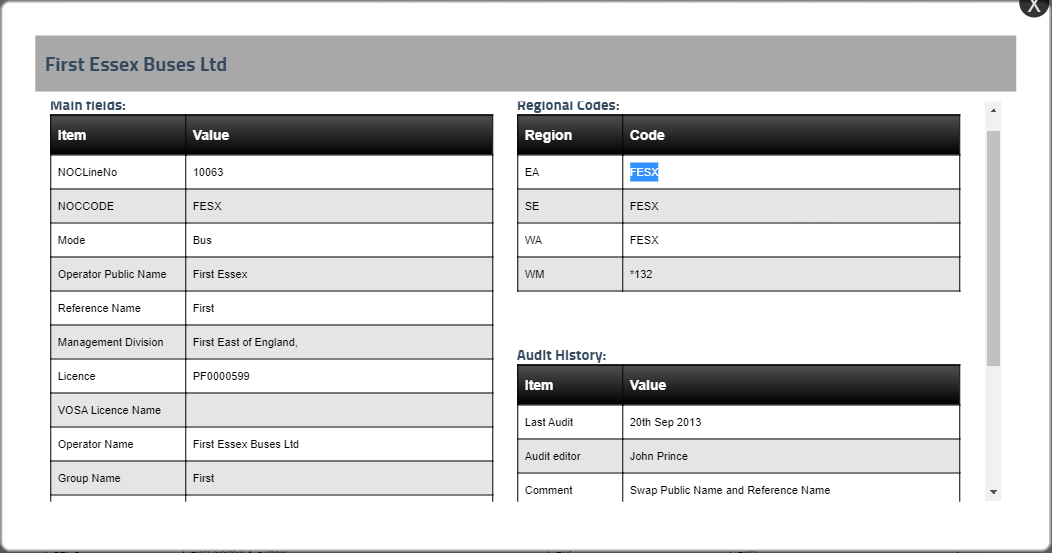
CodeInPlace – Final Project

|  |  |
| --- | --- |
| 65-OneStop-> Town | 65-HSBC -> Highwoods |
|  |  |



## **Transportapi website address**

<https://developer.transportapi.com/docs?raml=https://transportapi.com/v3/raml/transportapi.raml>

## **One particular bus service, identified by line and operator**

<https://transportapi.com/v3/uk/bus/services/FESX:65.json?app_id=9e91c41c&app_key=ebaa5b9461f7f42778146f909073d17a>

***Returned Data***

{

"id": "https://transportapi.com/v3/uk/bus/services/FESX:65.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"operator": {

"code": "FESX",

"name": "First Essex"

},

"line": "65",

"line\_name": "65",

"directions": [

{

"name": "outbound",

"destination": {

"description": "High Woods, Essex"

}

},

{

"name": "inbound",

"destination": {

"description": "Stanway, Essex"

}

}

],

"centroid": {

"type": "Point",

"coordinates": [

0.876455,

51.900005

]

},

"source": "tnds",

"acknowledgements": "Contains information from tnds."

## **Pulling values from the dictionary.**

The below shows a way of getting the end points of the journey

**print(my\_dict['directions'][0]['destination'])**

{'description': 'High Woods, Essex'}

**print(my\_dict['directions'][0]['destination']['description'])**

High Woods, Essex

**print(my\_dict['directions'][1]['destination']['description'])**

Stanway, Essex

## **Bus departures at a given bus stop (live)**

<https://transportapi.com/v3/uk/bus/stop/1500AA20/live.json?app_id=9e91c41c&app_key=ebaa5b9461f7f42778146f909073d17a&group=route&nextbuses=yes>

***Returned Data***

{

"atcocode": "1500AA20",

"smscode": "esxamptg",

"request\_time": "2020-05-16T00:09:55+01:00",

"name": "Causton Road",

"stop\_name": "Causton Road",

"bearing": "N",

"indicator": "opp",

"locality": "Colchester",

"location": {

"type": "Point",

"coordinates": [

0.89575,

51.89518

]

},

"departures": {}

}

## **Bus departures at a given bus stop (timetabled)**

<https://transportapi.com/v3/uk/bus/stop/1500AA20/2020-05-15/07:10/timetable.json?app_id=9e91c41c&app_key=ebaa5b9461f7f42778146f909073d17a&group=route>

***Returned Data***

{

"atcocode": "1500AA20",

"smscode": "esxamptg",

"request\_time": "2020-05-15T07:10:00+01:00",

"name": "Causton Road",

"stop\_name": "Causton Road",

"bearing": "N",

"indicator": "opp",

"locality": "Colchester",

"location": {

"type": "Point",

"coordinates": [

0.89575,

51.89518

]

},

"departures": {

"2": [

{

"mode": "bus",

"line": "2",

"line\_name": "2",

"direction": "Great Horkesley, Colchester",

"operator": "ARHE",

"operator\_name": "Arriva Herts and Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "07:44",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "07:44",

"dir": "inbound",

"id": "https://transportapi.com/v3/uk/bus/route/ARHE/2/inbound/1500AA20/2020-05-15/07:44/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

}

],

"8": [

{

"mode": "bus",

"line": "8--2",

"line\_name": "8",

"direction": "Highwoods, Colchester",

"operator": "ARHE",

"operator\_name": "Arriva Herts and Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "07:44",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "07:44",

"dir": "inbound",

"id": "https://transportapi.com/v3/uk/bus/route/ARHE/8--2/inbound/1500AA20/2020-05-15/07:44/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

},

{

"mode": "bus",

"line": "8--2",

"line\_name": "8",

"direction": "Highwoods, Colchester",

"operator": "ARHE",

"operator\_name": "Arriva Herts and Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "08:14",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "08:14",

"dir": "inbound",

"id": "https://transportapi.com/v3/uk/bus/route/ARHE/8--2/inbound/1500AA20/2020-05-15/08:14/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

},

{

"mode": "bus",

"line": "8--2",

"line\_name": "8",

"direction": "Highwoods, Colchester",

"operator": "ARHE",

"operator\_name": "Arriva Herts and Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "08:44",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "08:44",

"dir": "inbound",

"id": "https://transportapi.com/v3/uk/bus/route/ARHE/8--2/inbound/1500AA20/2020-05-15/08:44/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

}

],

"61": [

{

"mode": "bus",

"line": "61",

"line\_name": "61",

"direction": "Highwoods, Colchester",

"operator": "FESX",

"operator\_name": "First Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "07:20",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "07:20",

"dir": "inbound",

"id": "https://transportapi.com/v3/uk/bus/route/FESX/61/inbound/1500AA20/2020-05-15/07:20/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

},

{

"mode": "bus",

"line": "61",

"line\_name": "61",

"direction": "Highwoods, Colchester",

"operator": "FESX",

"operator\_name": "First Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "07:49",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "07:49",

"dir": "inbound",

"id": "https://transportapi.com/v3/uk/bus/route/FESX/61/inbound/1500AA20/2020-05-15/07:49/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

},

{

"mode": "bus",

"line": "61",

"line\_name": "61",

"direction": "Highwoods, Colchester",

"operator": "FESX",

"operator\_name": "First Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "08:19",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "08:19",

"dir": "inbound",

"id": "https://transportapi.com/v3/uk/bus/route/FESX/61/inbound/1500AA20/2020-05-15/08:19/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

}

],

"62": [

{

"mode": "bus",

"line": "62",

"line\_name": "62",

"direction": "Colchester",

"operator": "FESX",

"operator\_name": "First Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "08:20",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "08:20",

"dir": "outbound",

"id": "https://transportapi.com/v3/uk/bus/route/FESX/62/outbound/1500AA20/2020-05-15/08:20/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

}

],

"65": [

{

"mode": "bus",

"line": "65",

"line\_name": "65",

"direction": "Highwoods, Colchester",

"operator": "FESX",

"operator\_name": "First Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "07:26",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "07:26",

"dir": "outbound",

"id": "https://transportapi.com/v3/uk/bus/route/FESX/65/outbound/1500AA20/2020-05-15/07:26/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

},

{

"mode": "bus",

"line": "65",

"line\_name": "65",

"direction": "Highwoods, Colchester",

"operator": "FESX",

"operator\_name": "First Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "07:31",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "07:31",

"dir": "outbound",

"id": "https://transportapi.com/v3/uk/bus/route/FESX/65/outbound/1500AA20/2020-05-15/07:31/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

},

{

"mode": "bus",

"line": "65",

"line\_name": "65",

"direction": "Highwoods, Colchester",

"operator": "FESX",

"operator\_name": "First Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "08:01",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "08:01",

"dir": "outbound",

"id": "https://transportapi.com/v3/uk/bus/route/FESX/65/outbound/1500AA20/2020-05-15/08:01/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

}

],

"66": [

{

"mode": "bus",

"line": "66",

"line\_name": "66",

"direction": "West Bergholt, Colchester",

"operator": "FESX",

"operator\_name": "First Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "08:11",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "08:11",

"dir": "inbound",

"id": "https://transportapi.com/v3/uk/bus/route/FESX/66/inbound/1500AA20/2020-05-15/08:11/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

}

],

"77": [

{

"mode": "bus",

"line": "77",

"line\_name": "77",

"direction": "Colchester",

"operator": "ARHE",

"operator\_name": "Arriva Herts and Essex",

"date": "2020-05-15",

"aimed\_departure\_time": "08:25",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "08:25",

"dir": "inbound",

"id": "https://transportapi.com/v3/uk/bus/route/ARHE/77/inbound/1500AA20/2020-05-15/08:25/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

}

],

"754": [

{

"mode": "bus",

"line": "754",

"line\_name": "754",

"direction": "Sudbury",

"operator": "CHAM",

"operator\_name": "Chambers",

"date": "2020-05-15",

"aimed\_departure\_time": "07:51",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "07:51",

"dir": "outbound",

"id": "https://transportapi.com/v3/uk/bus/route/CHAM/754/outbound/1500AA20/2020-05-15/07:51/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

}

],

"63A": [],

"80A": [

{

"mode": "bus",

"line": "80A",

"line\_name": "80A",

"direction": "Boxted",

"operator": "PNTR",

"operator\_name": "Panther Travel",

"date": "2020-05-15",

"aimed\_departure\_time": "08:40",

"expected\_departure\_date": null,

"expected\_departure\_time": null,

"best\_departure\_estimate": "08:40",

"dir": "inbound",

"id": "https://transportapi.com/v3/uk/bus/route/PNTR/80A/inbound/1500AA20/2020-05-15/08:40/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a",

"source": "tnds"

}

]

}

}

## **The route of one specific bus**

<https://transportapi.com/v3/uk/bus/route/FESX/65/outbound/1500AA20/2020-05-15/07:10/timetable.json?app_id=9e91c41c&app_key=ebaa5b9461f7f42778146f909073d17a&edge_geometry=false&stops=ALL>

***Returned Data***

{

"request\_time": "2020-05-16T00:13:53+01:00",

"operator": "FESX",

"operator\_name": "First Essex",

"line": "65",

"line\_name": "65",

"origin\_atcocode": "1500AA20",

"dir": "outbound",

"stops": [

{

"time": "07:26",

"date": "2020-05-15",

"atcocode": "1500AA20",

"name": "Causton Road",

"stop\_name": "Causton Road",

"smscode": "esxamptg",

"locality": "Colchester",

"bearing": "N",

"indicator": "opp",

"latitude": 51.89518,

"longitude": 0.89575

},

{

"time": "07:27",

"date": "2020-05-15",

"atcocode": "150033039010",

"name": "The Albert",

"stop\_name": "The Albert",

"smscode": "esxampwg",

"locality": "Colchester",

"bearing": "N",

"indicator": "opp",

"latitude": 51.89682,

"longitude": 0.89547

},

{

"time": "07:29",

"date": "2020-05-15",

"atcocode": "150033095001",

"name": "Railway Station Layby (Stand Ea)",

"stop\_name": "Railway Station Layby",

"smscode": "esxamdpt",

"locality": "Colchester",

"bearing": "N",

"indicator": "Stand Ea",

"latitude": 51.89965,

"longitude": 0.89489

},

{

"time": "07:29",

"date": "2020-05-15",

"atcocode": "1500DGK189",

"name": "Bruff Close",

"stop\_name": "Bruff Close",

"smscode": "esxgwdta",

"locality": "Colchester",

"bearing": "NE",

"indicator": "E-bound",

"latitude": 51.90235,

"longitude": 0.89618

},

{

"time": "07:31",

"date": "2020-05-15",

"atcocode": "150033012007",

"name": "Turner Rise",

"stop\_name": "Turner Rise",

"smscode": "esxajwdm",

"locality": "Colchester",

"bearing": "NE",

"indicator": "opp",

"latitude": 51.9044,

"longitude": 0.90105

},

{

"time": "07:32",

"date": "2020-05-15",

"atcocode": "150033012006",

"name": "Wryneck Close",

"stop\_name": "Wryneck Close",

"smscode": "esxajwdj",

"locality": "Colchester",

"bearing": "N",

"indicator": "opp",

"latitude": 51.90722,

"longitude": 0.9027

},

{

"time": "07:33",

"date": "2020-05-15",

"atcocode": "1500IM578",

"name": "General Hospital - main Rd",

"stop\_name": "General Hospital - main Rd",

"smscode": "esxajwda",

"locality": "Colchester",

"bearing": "N",

"indicator": "o/s",

"latitude": 51.9099,

"longitude": 0.90234

},

{

"time": "07:33",

"date": "2020-05-15",

"atcocode": "150033012003",

"name": "Kingswood Road",

"stop\_name": "Kingswood Road",

"smscode": "esxajwat",

"locality": "Colchester",

"bearing": "N",

"indicator": "opp",

"latitude": 51.91238,

"longitude": 0.90191

},

{

"time": "07:34",

"date": "2020-05-15",

"atcocode": "150033003004",

"name": "Thornwood",

"stop\_name": "Thornwood",

"smscode": "esxajtwd",

"locality": "Mile End, Colchester",

"bearing": "NE",

"indicator": "opp",

"latitude": 51.91506,

"longitude": 0.90089

},

{

"time": "07:35",

"date": "2020-05-15",

"atcocode": "150033003002",

"name": "Bedford Road",

"stop\_name": "Bedford Road",

"smscode": "esxajtpw",

"locality": "Mile End, Colchester",

"bearing": "NE",

"indicator": "opp",

"latitude": 51.91672,

"longitude": 0.90424

},

{

"time": "07:36",

"date": "2020-05-15",

"atcocode": "1500OXLEYPAR",

"name": "The Water Tower",

"stop\_name": "The Water Tower",

"smscode": "esxjdawg",

"locality": "Mile End, Colchester",

"bearing": "NE",

"indicator": "o/s",

"latitude": 51.91978,

"longitude": 0.91

},

{

"time": "07:37",

"date": "2020-05-15",

"atcocode": "150033004001",

"name": "Julian Avenue",

"stop\_name": "Julian Avenue",

"smscode": "esxajtpj",

"locality": "Mile End, Colchester",

"bearing": "NE",

"indicator": "opp",

"latitude": 51.92143,

"longitude": 0.91557

},

{

"time": "07:37",

"date": "2020-05-15",

"atcocode": "150033004901",

"name": "Matchett Drive",

"stop\_name": "Matchett Drive",

"smscode": "esxjpdwp",

"locality": "Mile End, Colchester",

"bearing": "E",

"indicator": "adj",

"latitude": 51.92226,

"longitude": 0.91822

},

{

"time": "07:39",

"date": "2020-05-15",

"atcocode": "150033006003",

"name": "Newcomen Way",

"stop\_name": "Newcomen Way",

"smscode": "esxajtpg",

"locality": "Colchester",

"bearing": "S",

"indicator": "adj",

"latitude": 51.91946,

"longitude": 0.92109

},

{

"time": "07:39",

"date": "2020-05-15",

"atcocode": "150033006002",

"name": "Oyster Business Park",

"stop\_name": "Oyster Business Park",

"smscode": "esxajtpd",

"locality": "Colchester",

"bearing": "SE",

"indicator": "adj",

"latitude": 51.91798,

"longitude": 0.92252

},

{

"time": "07:40",

"date": "2020-05-15",

"atcocode": "1500IM585",

"name": "Brinkley Lane",

"stop\_name": "Brinkley Lane",

"smscode": "esxajwgm",

"locality": "Highwoods, Colchester",

"bearing": "SW",

"indicator": "SW-bound",

"latitude": 51.91628,

"longitude": 0.92273

},

{

"time": "07:40",

"date": "2020-05-15",

"atcocode": "1500DGK219",

"name": "Regents Close",

"stop\_name": "Regents Close",

"smscode": "esxjawdm",

"locality": "Highwoods, Colchester",

"bearing": "SE",

"indicator": "adj",

"latitude": 51.91534,

"longitude": 0.92219

},

{

"time": "07:41",

"date": "2020-05-15",

"atcocode": "1500IM1198B",

"name": "Berkley Close",

"stop\_name": "Berkley Close",

"smscode": "esxajwgp",

"locality": "Highwoods, Colchester",

"bearing": "S",

"indicator": "adj",

"latitude": 51.9135,

"longitude": 0.92349

},

{

"time": "07:41",

"date": "2020-05-15",

"atcocode": "150033010003",

"name": "Derwent Road",

"stop\_name": "Derwent Road",

"smscode": "esxajwgw",

"locality": "Highwoods, Colchester",

"bearing": "S",

"indicator": "S-bound",

"latitude": 51.91228,

"longitude": 0.92295

},

{

"time": "07:43",

"date": "2020-05-15",

"atcocode": "150033009004",

"name": "Baronia Croft",

"stop\_name": "Baronia Croft",

"smscode": "esxajwmj",

"locality": "Highwoods, Colchester",

"bearing": "S",

"indicator": "adj",

"latitude": 51.90868,

"longitude": 0.92158

},

{

"time": "07:43",

"date": "2020-05-15",

"atcocode": "1500IM568Y",

"name": "Pinecroft Gardens",

"stop\_name": "Pinecroft Gardens",

"smscode": "esxgwjtj",

"locality": "Highwoods, Colchester",

"bearing": "W",

"indicator": "opp",

"latitude": 51.90754,

"longitude": 0.91765

},

{

"time": "07:44",

"date": "2020-05-15",

"atcocode": "150033009002",

"name": "Victoria Gardens",

"stop\_name": "Victoria Gardens",

"smscode": "esxajwmd",

"locality": "Highwoods, Colchester",

"bearing": "NW",

"indicator": "opp",

"latitude": 51.90959,

"longitude": 0.91485

},

{

"time": "07:45",

"date": "2020-05-15",

"atcocode": "150033009001",

"name": "Spindle Wood",

"stop\_name": "Spindle Wood",

"smscode": "esxajwma",

"locality": "Highwoods, Colchester",

"bearing": "E",

"indicator": "adj",

"latitude": 51.91164,

"longitude": 0.91501

},

{

"time": "07:47",

"date": "2020-05-15",

"atcocode": "1500IM2456B",

"name": "Highwood Square (Stop 3)",

"stop\_name": "Highwood Square",

"smscode": "esxjawma",

"locality": "Highwoods, Colchester",

"bearing": "NW",

"indicator": "Stop 3",

"latitude": 51.91048,

"longitude": 0.91805

}

],

"id": "https://transportapi.com/v3/uk/bus/route/FESX/65/outbound/1500AA20/2020-05-15/07:10/timetable.json?app\_id=9e91c41c&app\_key=ebaa5b9461f7f42778146f909073d17a"

}