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| Title | Create New Project |
| URL | /create |
| Method | GET |
| URL Params | None |
| Data Params | None |
| Success Response | A successful response will include an alphanumeric projectID as well as an empty canvas SVG object of size 200px \* 200px.  body :  {  projectID : string,  canvas :  {  width : double,  height : double,  layers : Array[Layer],  html : string  }  }  *The structure for a prototype response will be identical for most of the following requests and will therefore be omitted from the affected API calls.*  **Example:**  body :  {  projectID : "exampleID123",  canvas :  {  width : 200.0,  height : 200.0,  layers : [],  html : "<svg width=\"200.0\"height=\"200.0\"base Profile=\"full\"xmlns=\"http://www.w3.org/2000  /svg\"></svg>"  }  } |
| Error Response | An invalid request will yield a standardized error response message (time zone GMT+1):  {  timestamp : [yyyy-mm-dd, hh:mm:ss.ms],  status : [HTTPErrorCode],  error : HTTPErrorMessage,  message : [string],  path : [URI]  }  *The prototype structure for an error response will be identical for all of the subsequent requests and will therefore be omitted from the following API calls.*  **Example:**  {  timestamp : "2018-12-31 23:59:59.999",  status : 405,  error : "Method Not Allowed",  message : "Request method 'POST' not supported",  path : "/create"  } |
| Sample Call | $.ajax({  url: "/create",  type : "GET",  success : function(r) {  console.log(r);  }  }); |

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| Title | Add New Layer To Canvas |
| URL | /addLayer/:projectID |
| Method | POST |
| URL Params | **Required:**  projectID = [string]  **Example:**  projectID = “ExampleID123” |
| Data Params | None |
| Success Response | A successful response adds a Layer to the Layer list (compare object with call for /create) in Canvas.  **Example:**  body :  {  projectID : "exampleID123",  canvas :  {  width : 200.0,  height : 200.0,  layers :  [{  shapes : [],  visible : true  }],  html : "<svg width=\"200.0\"height=\"200.0\"base Profile=\"full\"xmlns=\"http://www.w3.org/2000  /svg\"></svg>"  }  } |
| Error Response | **Example:**  {  timestamp : "2018-12-31 23:59:59.999",  status : 405,  error : "Method Not Allowed",  message : "Request method 'GET' not supported",  path : "/addLayer/ExampleID123"  } |
| Sample Call | $.ajax({  url: "/addLayer/ExampleID123",  type : "POST",  success : function(r) {  console.log(r);  }  }); |

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| Title | Add New Shape To Layer |
| URL | /addShape/:projectID |
| Method | POST |
| URL Params | **Required:**  projectID = [string]  **Example:**  projectID = “ExampleID123” |
| Data Params | {  b : {  layerIndex : [integer],  shapeClass : [shapeType]  }  }  **Example:**  {  b : {  layerIndex : "0",  shapeClass : "shapes.Circle"  }  } |
| Success Response | A successful response adds a Shape to a specified Layer on the Canvas.  **Example:**  body :  {  projectID : "exampleID123",  canvas :  {  width : 200.0,  height : 200.0,  layers : [{  shapes : [{  shapeClass : "shapes.Circle",  fillColour : "#FFFFFF",  strokeColour : "#000000",  strokeWidth : 1.0,"opacity":1.0,  center : {"x":50.0,"y":50.0},  radius : 50.0}],  visible : true  }],  html : "<svg width=\"200.0\"height=\"200.0\"base Profile=\"full\"xmlns=\"http://www.w3.org/2000  /svg\"></svg>"  }  } |
| Error Response | **Example:**  {  timestamp : "2018-12-31 23:59:59.999",  status : 500,  error : "Internal Server Error",  message : "Class Trapezoid does not exist!  path : "/addShape/ExampleID12"  } |
| Sample Call | $.ajax({  url: "/addShape/ExampleID123",  type : "POST",  success : function(r) {  console.log(r); |

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| Title | Edit Canvas |
| URL | /editCanvas/:projectID |
| Method | POST |
| URL Params | **Required:**  projectID = [string]  **Example:**  projectID = “ExampleID123” |
| Data Params | {  b : {  height : [double],  width : [double]  }  }  **Example:**  {  b : {  height : 400.0,  width : 400.0  }  } |
| Success Response | **Example:**  body :  {  projectID : "exampleID",  canvas : {  width : 400.0,  height : 400.0,  layers : [],  html : "<svg width=\"400.0\" height=\"400.0\"baseProfile=\ "full\"xmlns=\"http://www.w3.org/2000/svg\"></svg>"  }  } |
| Error Response | **Example:**  {  timestamp : "2018-12-31 23:59:59.999",  status : 500,  error : "Internal Server Error",  message : "Height and width must both be positive!",  path : "/editCanvas/ExampleID123"  } |
| Sample Call | $.ajax({  url: "/editCanvas/ExampleID123",  type : "POST",  success : function(r) {  console.log(r);  }  }); |

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| Title | Edit Layer |
| URL | /editLayer/:projectID |
| Method | POST |
| URL Params | **Required:**  projectID = [string]  **Example:**  projectID = “ExampleID123” |
| Data Params | {  b : {  layerIndex : [int],  visible : [boolean]  }  }  **Example:**  {  b : {  layerIndex : 0,  visible : false  }  } |
| Success Response | **Example:**  body :  {  projectID : "exampleID",  canvas : {  width : 400.0,  height : 400.0,  layers : [  {  shapes : [  {  shapeClass : "shapes.Circle",  fillColour : "#FFFFFF",  strokeColour : "#000000",  strokeWidth : 1.0,"opacity":1.0,  center : {"x":50.0,"y":50.0},  radius : 50.0}],  visible : false  }],  html : "<svg width=\"400.0\" height=\"400.0\"baseProfile=\ "full\"xmlns=\"http://www.w3.org/2000/svg\"></svg>"  }  } |
| Error Response | **Example:**  {  timestamp : "2018-12-31 23:59:59.999",  status : 500,  error : "Internal Server Error",  message : "Layer index out of bounds!",  path : "/editLayer/ExampleID123"  } |
| Sample Call | $.ajax({  url: "/editLayer/ExampleID123",  type : "POST",  success : function(r) {  console.log(r);  }  }); |

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| --- | --- |
| Title | Edit Shape |
| URL | /editShape/:projectID |
| Method | POST |
| URL Params | **Required:**  projectID = [string]  **Example:**  projectID = “ExampleID123” |
| Data Params | {  b : {  layerIndex : [int],  shapeIndex : [int]  shape : [shape]  }  }  **Example:**  {  b : {  layerIndex : 0,  shapeIndex : 3  shape : {  center : {  x : 100  y : 100  }  fillColour : "#FFFFFF"  opacity : 1  radius : "100"  shapeClass : "shapes.Circle"  strokeColour : "#000000"  strokeWidth : 1  }  } |
| Success Response | **Example:**  body :  {  projectID : "exampleID",  canvas : {  width : 400.0,  height : 400.0,  layers : [  {  shapes : [  {  shapeClass : "shapes.Circle",  fillColour : "#FFFFFF",  strokeColour : "#000000",  strokeWidth : 1.0,"opacity":1.0,  center : {"x":100.0,"y":100.0},  radius : 100.0}],  visible : true  }],  html : "<svg width="400.0" height="400.0" baseProfile="full" xmlns="http://www.w3.org/2000/svg"><circle cx="100.0" cy="100.0" r="100.0" fill="#FFFFFF" stroke="#000000" stroke- width="1.0" opacity="1.0"></circle></svg>"  }  } |
| Error Response | **Example:**  {  timestamp : "2018-12-31 23:59:59.999",  status : 500,  error : "Internal Server Error",  message : "Shape not found!",  path : "/editShape/ExampleID123"  } |
| Sample Call | $.ajax({  url: "/editShape/ExampleID123",  type : "POST",  success : function(r) {  console.log(r);  }  }); |

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| Title | Delete Layer |
| URL | /deleteLayer/:projectID |
| Method | POST |
| URL Params | **Required:**  projectID = [string]  **Example:**  projectID = “ExampleID123” |
| Data Params | {  b : {  layerIndex : [int],  }  }  **Example:**  {  b : {  layerIndex : 0,  }  } |
| Success Response | **Example:**  body :  {  projectID : "exampleID",  canvas : {  width : 400.0,  height : 400.0,  layers : [],  html : "<svg width="400.0" height="400.0" baseProfile="full" xmlns="http://www.w3.org/2000/svg"></svg>"  }  } |
| Error Response | **Example:**  {  timestamp : "2018-12-31 23:59:59.999",  status : 500,  error : "Internal Server Error",  message : "Layer not found!",  path : "/deleteLayer/ExampleID123"  } |
| Sample Call | $.ajax({  url: "/deleteLayer/ExampleID123",  type : "POST",  success : function(r) {  console.log(r);  }  }); |

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| --- | --- |
| Title | Delete Shape |
| URL | /deleteShape/:projectID |
| Method | POST |
| URL Params | **Required:**  projectID = [string]  **Example:**  projectID = “ExampleID123” |
| Data Params | {  b : {  layerIndex : [int],  shapeIndex : [int]  }  }  **Example:**  {  b : {  layerIndex : 0,  shapeIndex : 0  }  } |
| Success Response | **Example:**  body :  {  projectID : "exampleID",  canvas : {  width : 400.0,  height : 400.0,  layers :  [{  shapes : [],  visible : true  }],  html : "<svg width="400.0" height="400.0" baseProfile="full" xmlns="http://www.w3.org/2000/svg"></svg>"  }  } |
| Error Response | **Example:**  {  timestamp : "2018-12-31 23:59:59.999",  status : 500,  error : "Internal Server Error",  message : "Shape not found!",  path : "/deleteShape/ExampleID123"  } |
| Sample Call | $.ajax({  url: "/deleteShape/ExampleID123",  type : "POST",  success : function(r) {  console.log(r);  }  }); |