**Relative velocity**

**Developer Documentation**

* Project Directory Structure

This project contains files and folders. The structure of the contents of this folder is outlined below:

* images/

This contains any images used by the relative velocity ,

* object1.html
* object2.htm file.
* js/

This contains the JavaScript files used.

* bootstrap.js
* bootstrap.min.js
* npm.js

This contains all JavaScript code used by the project.

* object1.html

This contains all Methods, variable, for object1.

* object2.html

This contains all Methods, variable, for object2.

* css /

Style Sheet for this project

This contains all HTML code used by the project.

* bootstrap.css
* bootstrap.min.css
* bootstrap-theme.css
* bootstrap-theme.min.css
* font-awesome.min
* Object1.html

The object1.html file contains all main functionality functions used by this project

.These are defined with several method and variables, explained below.

* Variable

var flag=1

one for case 1

var flag=2

two for case 2

|  |
| --- |
| case1 |
|  | var vo; object |
|  | var rvo; relativity of  velocity |
|  | var rvog; relative  velocity of object relative to ground |
|  | var rvor; relative velocity of object relative to river |
|  | var deg;degree that given by user |
|  | var edeg;degree value of relative to earth,river |
|  | var cdeg;degree to draw curve |
|  | var vr;velocity of river |
|  | var wr;width of river |
|  | var ct;crossing time |
|  | var cd;crossing distance |
|  | var dd; distance of go down to the river |
|  | var dd2; distance of go up to the river |
|  |  |
|  | var tvo1;temp velocity for animation |
|  | var tvo2;temp velocity for animation |
|  | var c;counter for animation |
|  | var sh=400;canvas height |
|  | var r\_deg;radius of radian |
|  | var  angleInDegrees=180;drawing arrow |
|  |  |

|  |
| --- |
| case2 |
|  | var b1v;object 1 velocity |
|  | var b1v;object 2 velocity |
|  | var b1deg;object 1 bearing |
|  | var b2deg;object 2 bearing |
|  | var dist;//distance between object |
|  | var distdeg;bearing of object 2 relative to object 1 |
|  | var b1rv;object 1 relative velocity |
|  | var b2rv;object 2 relative velocity |
|  | var shortd;shortest distance if available |
|  | var time;time taken to obtain shortest distance |
|  | var bd1;distance from start position of object 1 when shortest distance |
|  | var bd2;distance from start position object 1 when shortest distance |
|  | var b1deg2;bearing of object 1 when shortest distance |
|  | var b2deg2;bearing of object 2 when shortest distance |

* In object one

Set canvas to animate

Var canvas = document.getELimentById(‘myCanvas’);

Var context = canvas.getContext(‘2d’);

Set object position

Var x = document.getELimentById(‘myCanvas’).width/2;

Var y = document.getELimentById(‘myCanvas’).height;