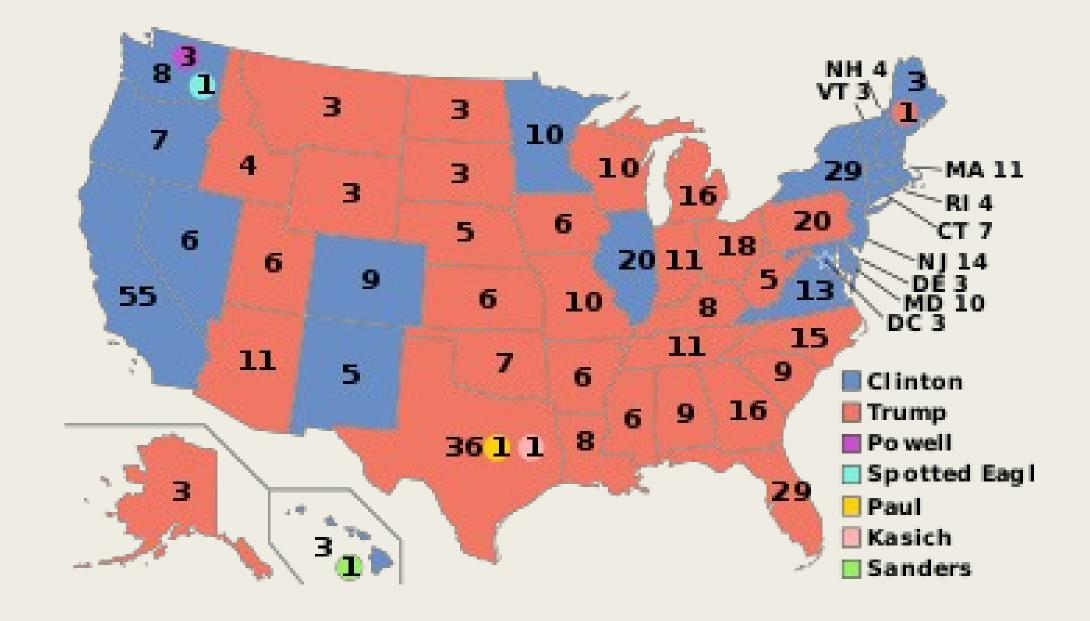
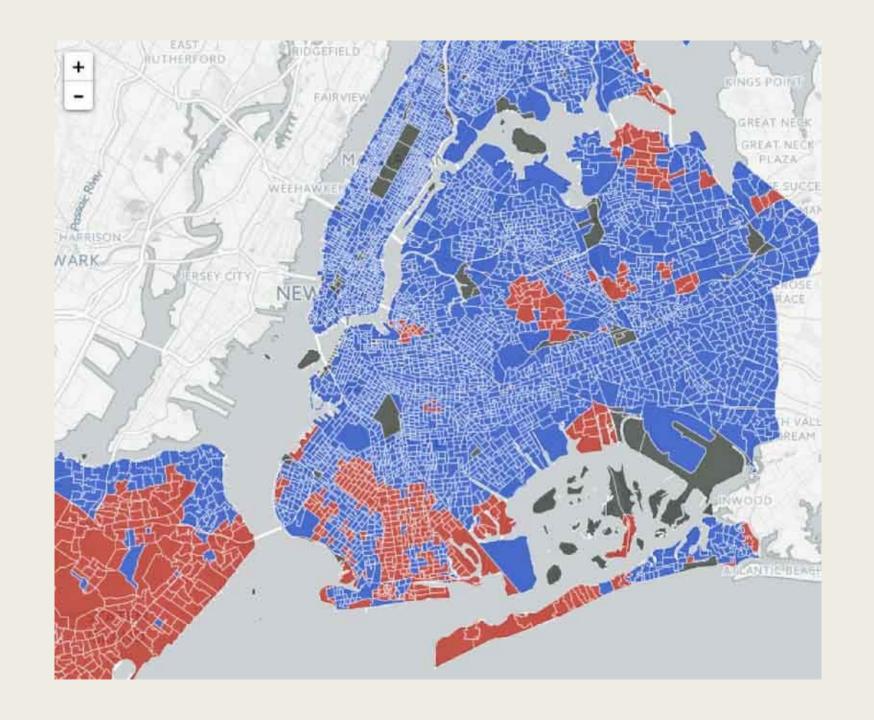
FREE APIS: THE NEXT GENERATION

Shaun Carland shauncarland.com shauncarland@gmail.com

BIG WORD ALERT!









Essex County

97.6% Reporting

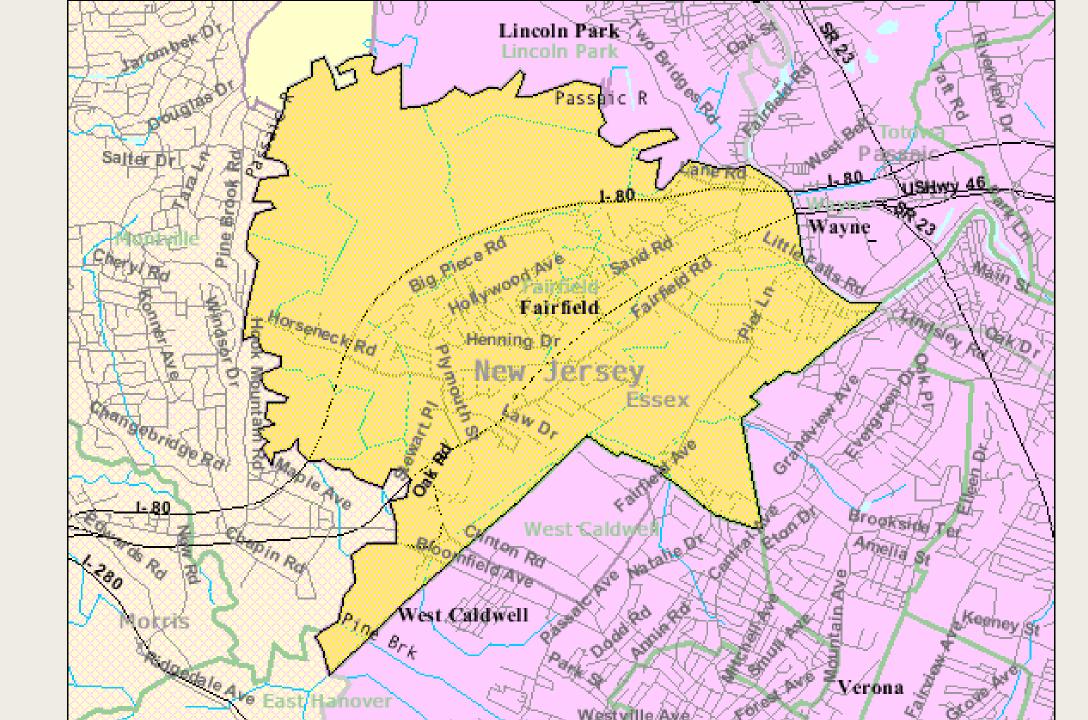
_	57.076 Reporting
1,031	Ph. Clinton77.1%
,059	® D. Trump 20.7%
,028	G. Johnson 1.0%
,830	⑤ J. Stein 0.9%
277	© D. Castle
295	Q.1%
123	(S) A. Kennedy 0.0%
72	⑤ G. La Riva 0.0%
93	M. Moorehead 0.0%
2	② R. De La Fuente 0.1% ⑤ A. Kennedy 0.0% ⑤ G. La Riva 0.0%

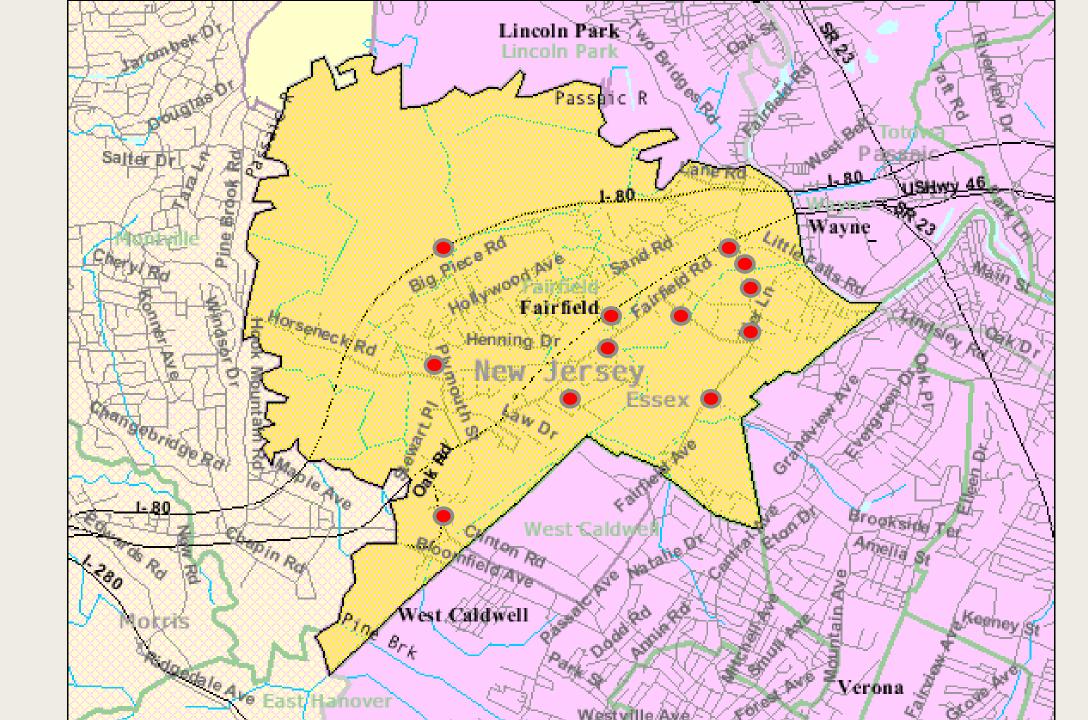
U.S. House, New Jersey District 11 General Election, 2016 [hide] Vote % Votes Candidate Party ✓ Rodney Frelinghuysen Republican 194,299 58% Incumbent 38.9% 130,162 Joseph Wenzel Democratic Financial Thomas DePasquale 7,056 2.1% Independence Libertarian 3,475 Jeff Hetrick 1% **Total Votes** 334,992

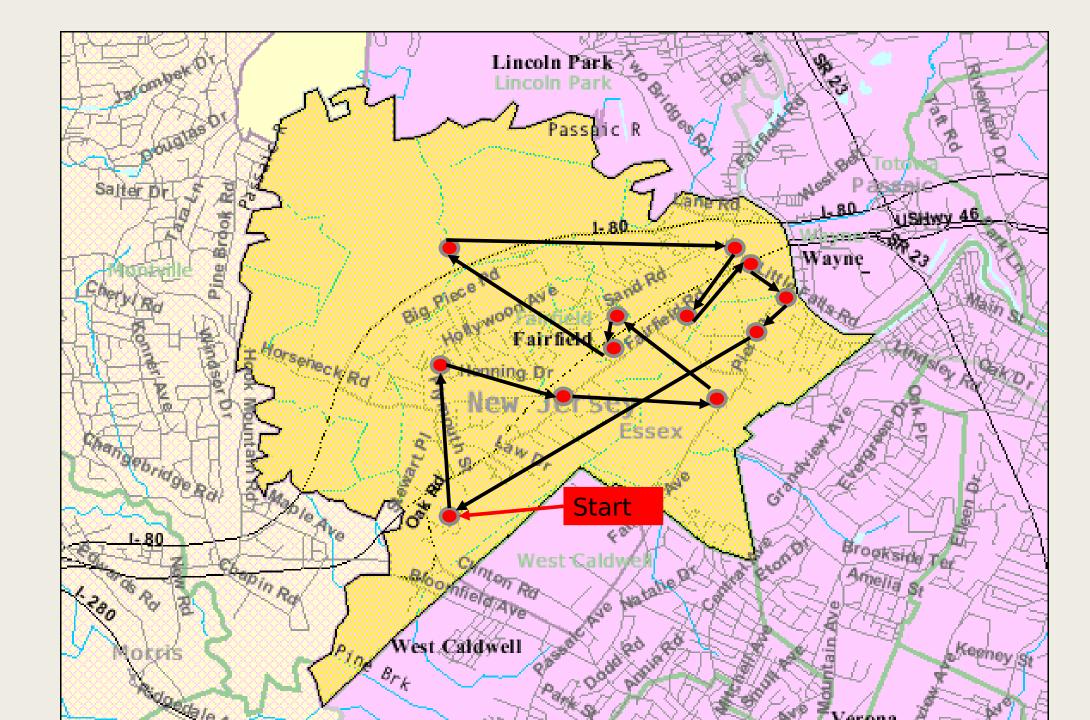
Source: New Jersey Division of Elections



Pilot. Prosecutor.

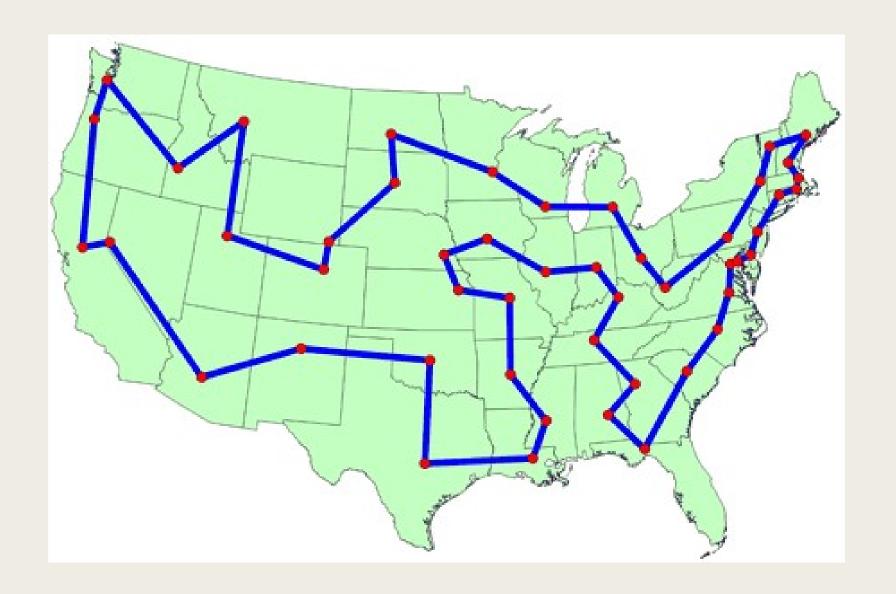


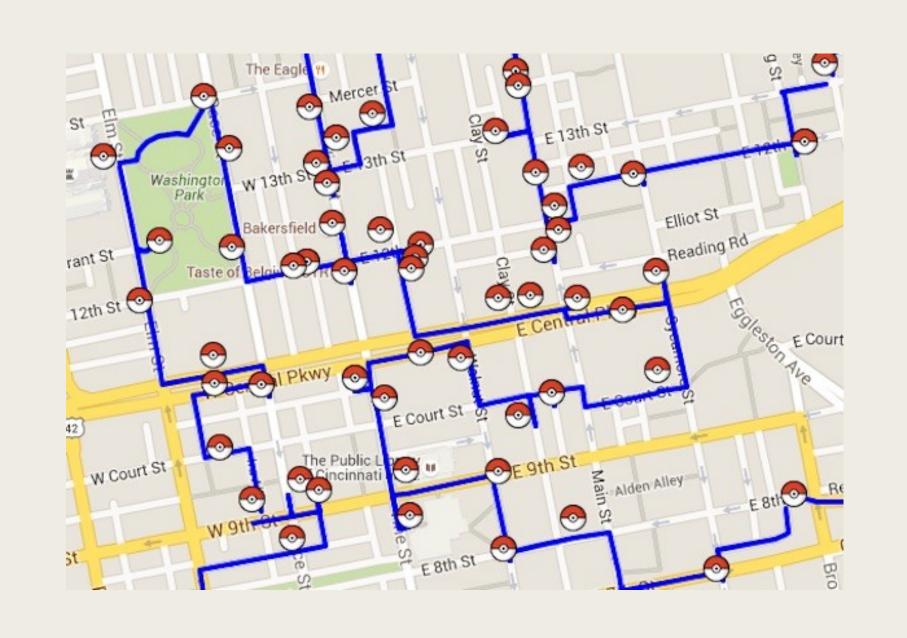


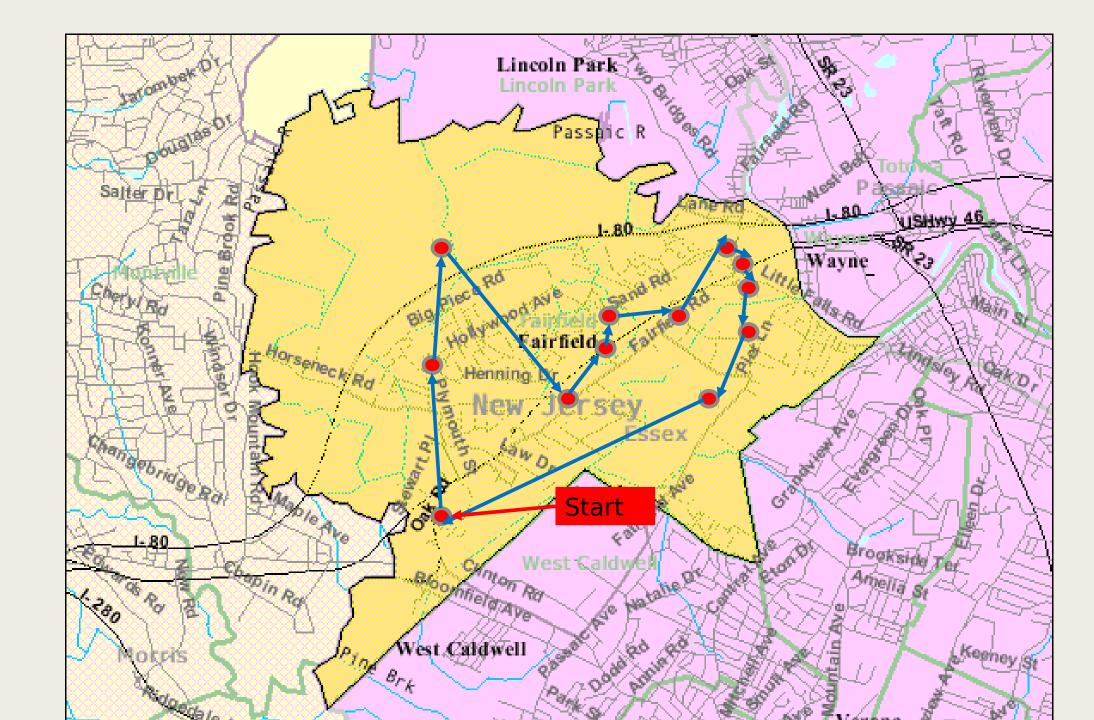


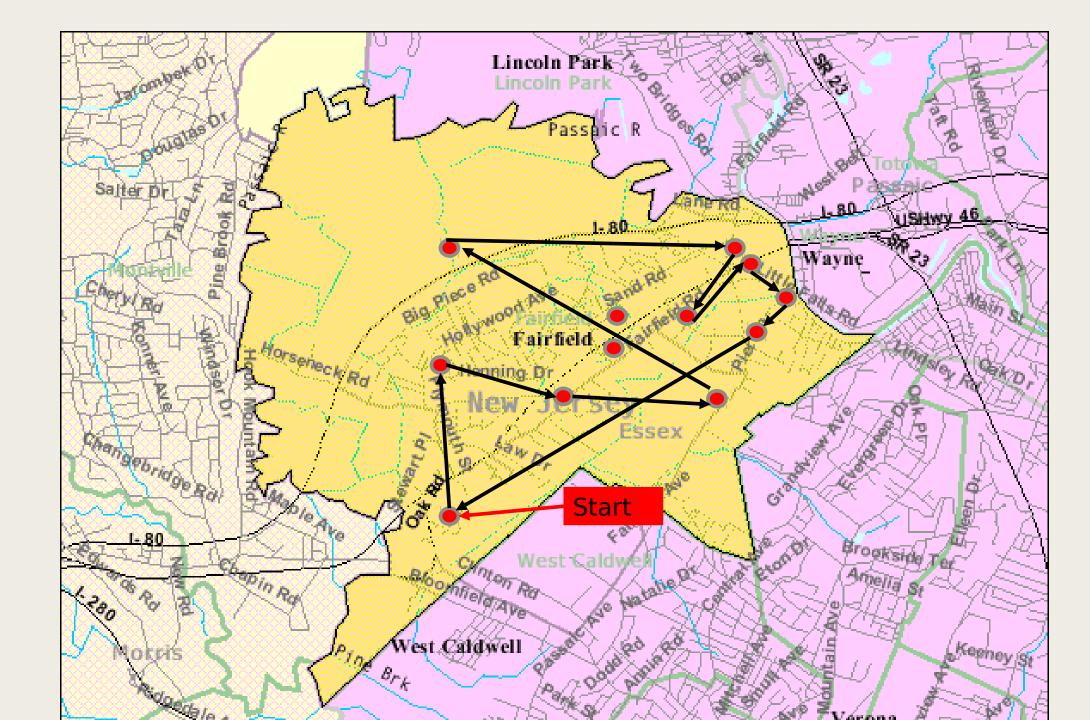
Traveling Salesperson Problem

■ Given a list of points and the distances between each pair of points, what is the shortest possible route that visits each city and returns to the origin point?









20 (Canvassers) * 7 (Minutes a day saved) * 5 (Days a week we canvass) * 6 (weeks)

4200 Minutes 70 Hours 3 Extra Days of Canvassing

Alaska House of Representatives District 1 Results

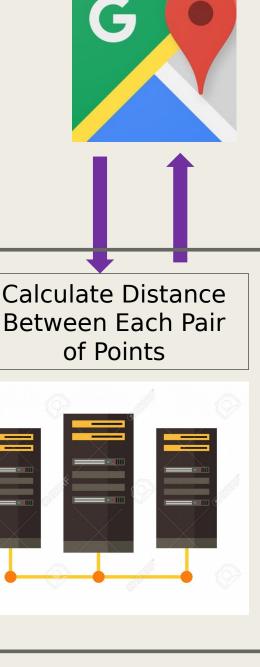
Candidate	%	Votes
Bart Lebon (R)	49.9	2,663
Kathryn Dodge (D)	49.8	2,662
Write-in votes	0.3	17

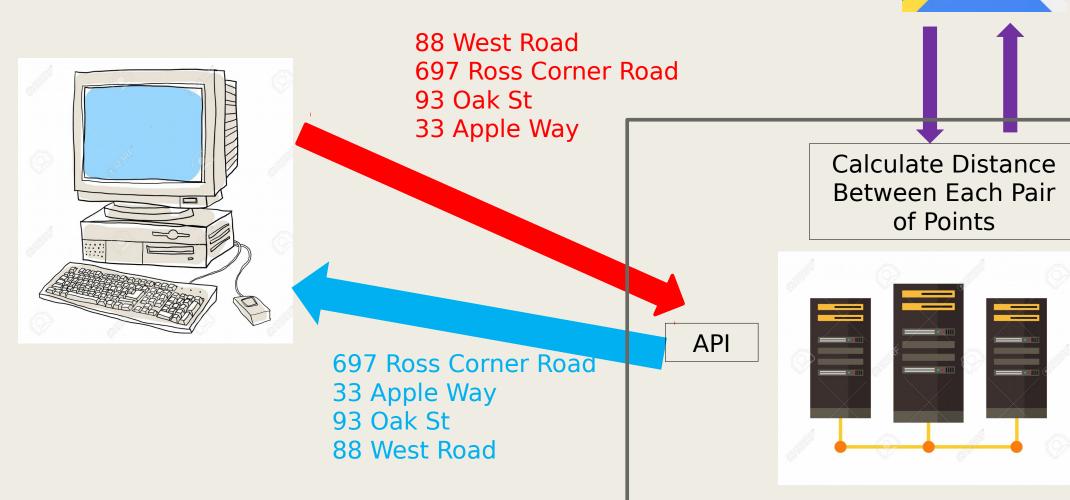
General election for U.S. House New Jersey District 11

	Candidate	%	Votes	
	Mikie Sherrill (D)	56. 8	183,684	
	Jay Webber (R)	<mark>4</mark> 2.1	136,322	
	Robert Crook	0.7	2,182	
	Ryan Martinez (Libertarian)	0.4	1,386	

Goals of this Application

- Allow users to send in a list of addresses into my application.
- Allow them to choose a specific starting point.
- Return to the user the list of addresses sorted in the order for them to visit, to optimize time.



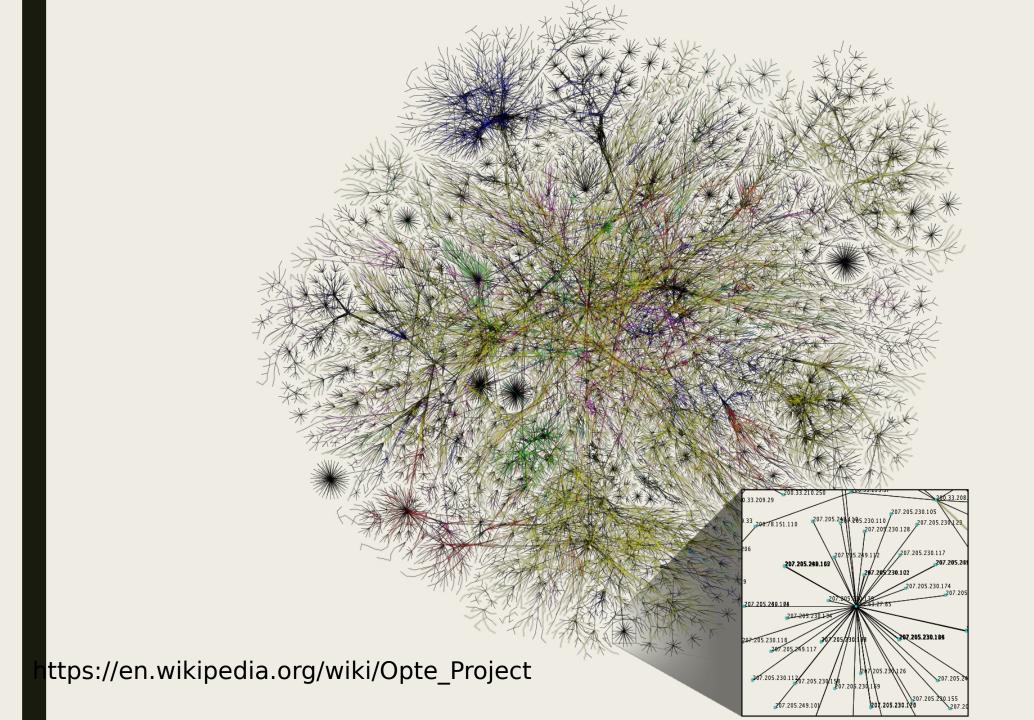


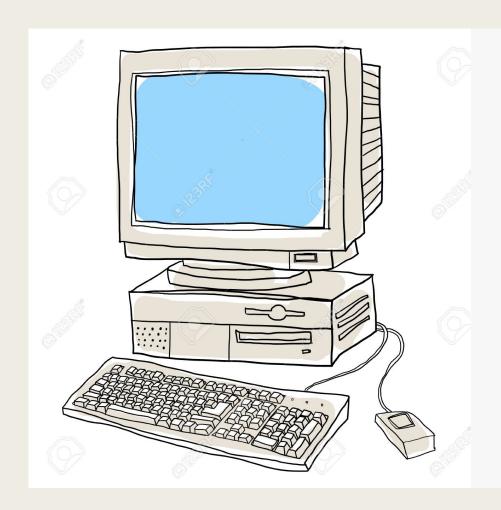
BIG WORD ALERT!



Application Programming Interface (API)

■ A set of subroutine definitions, communication protocols and tools for building software.

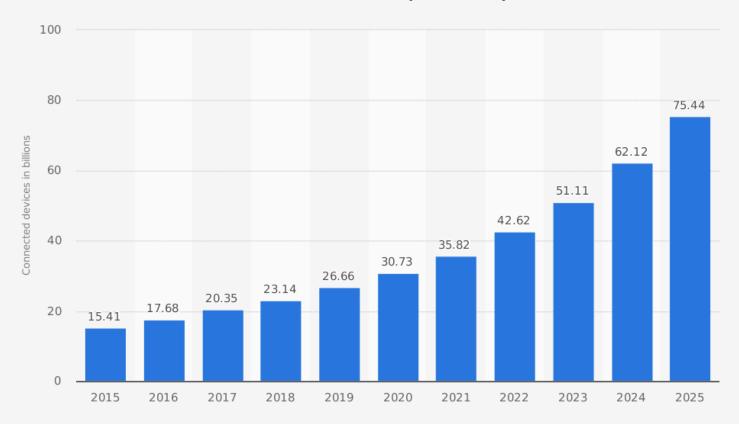








Internet of Things (IoT) connected devices installed base worldwide from 2015 to 2025 (in billions)

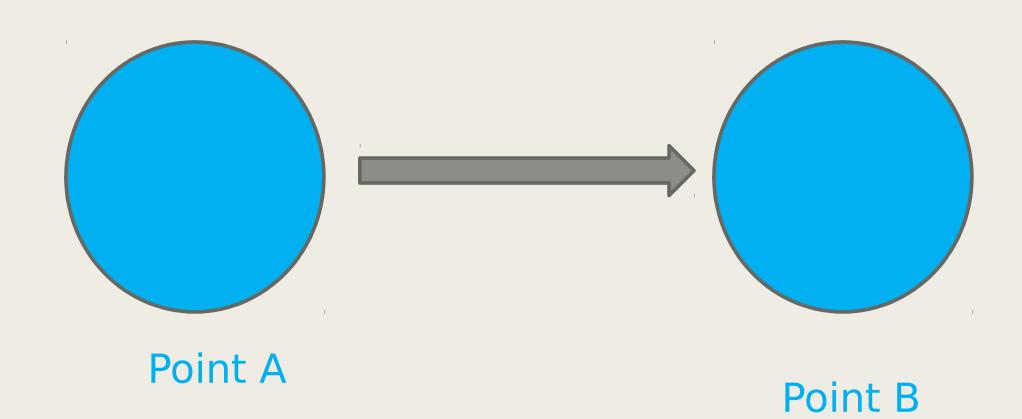


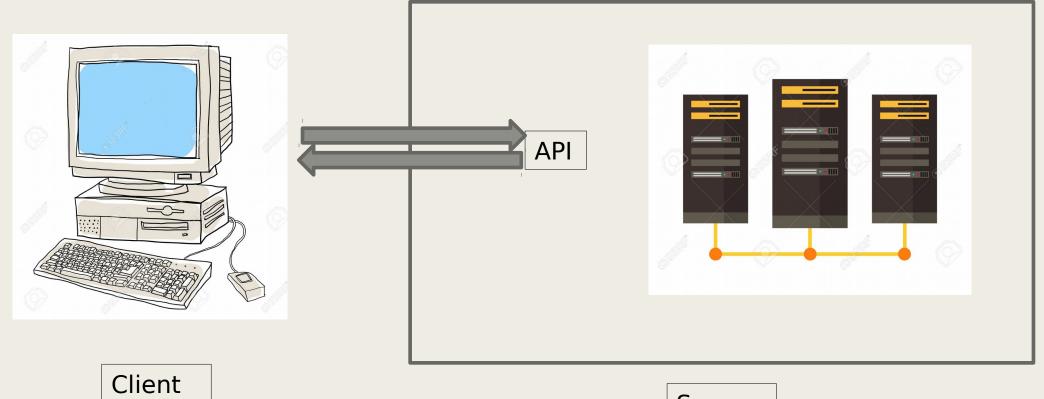
Source IHS

© Statista 2018

Additional Information:

Worldwide; IHS; 2015 to 2016





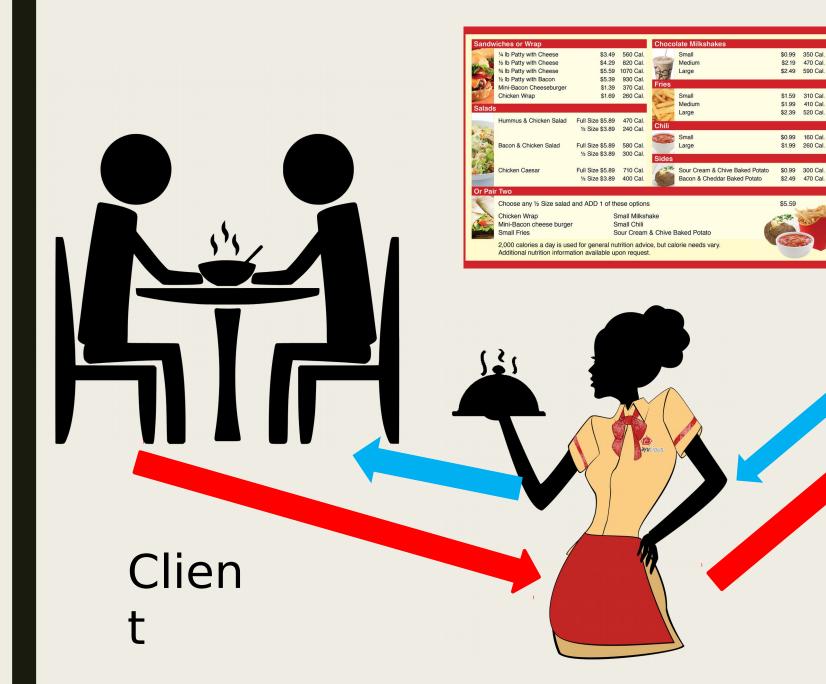
Server

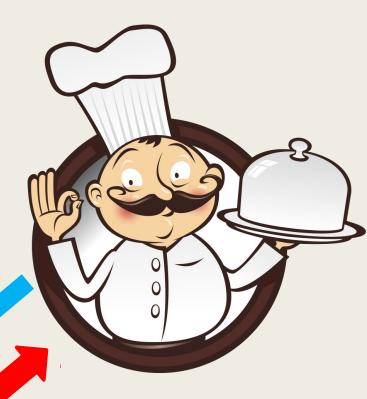




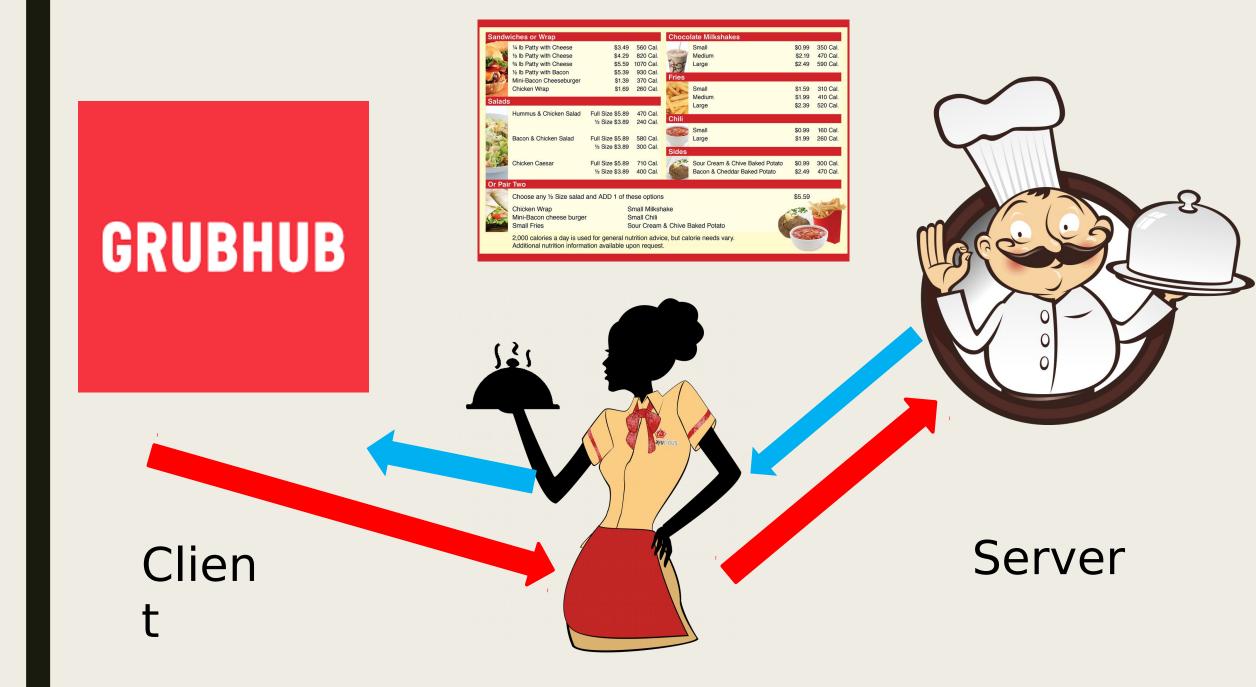
Clien t

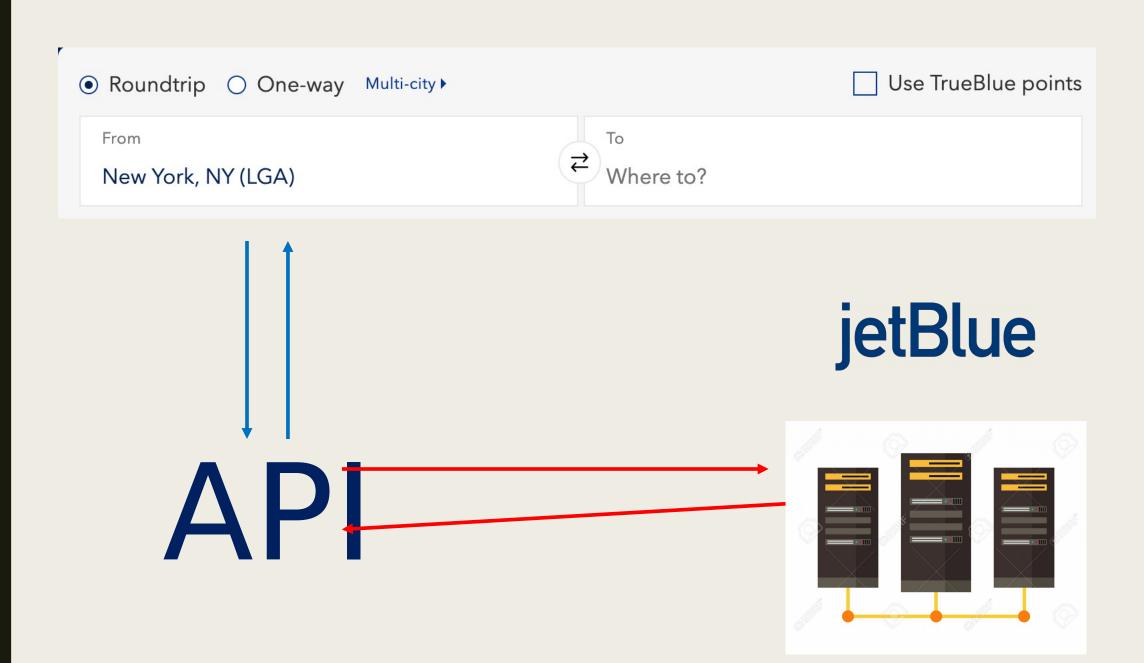
Server



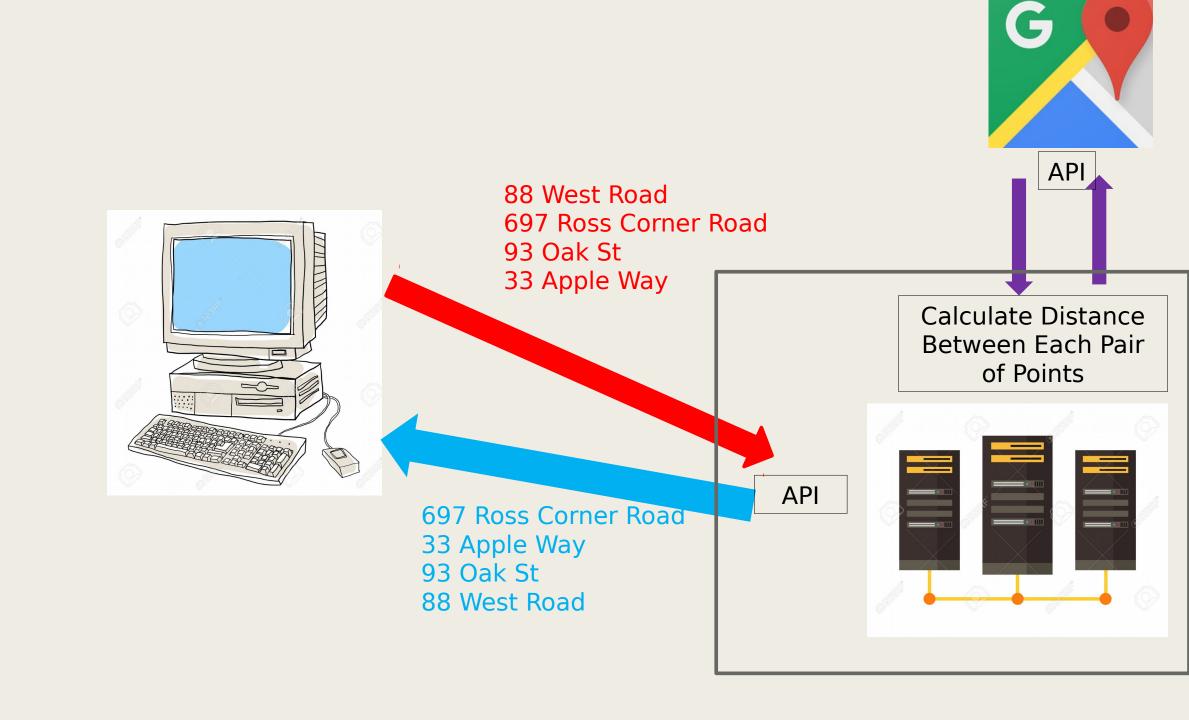


Server



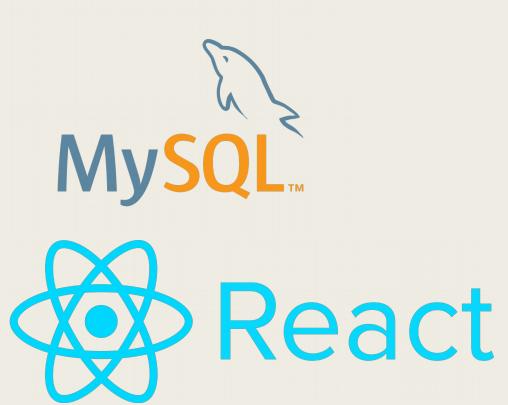






- The freedom to run the program as you wish, for any purpose (freedom 0).
- The freedom to study how the program works, and change it so it does your computing as you wish (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can help others (freedom 2).
- The freedom to distribute copies of your modified versions to others (freedom 3). By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.









JavaScript

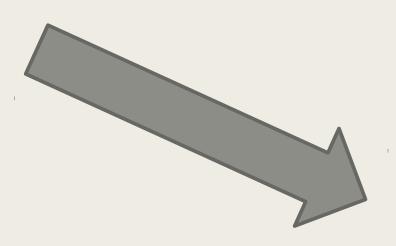
Address 1 13 Gore Rd. Lyman, ME 04076 Address 2 123 Bridge St Waterboro, ME 04061 Address 3 58 West St. Alfred, ME 04065 Address 4 697 Ross Corner Rd. Shapleigh, ME 04174 **SUBMI**

BIG WORD ALERT!



Frameworks & Programming Languages

- Programming Language The vocabularies developers use to build applications and tell a piece of software what to do, how to do it, and when to do it.
 - E.g. JavaScript
- Framework The foundation on which software developers can build programs for specific platforms.
 - Frameworks are written in a programming language.
 - E.g. React



(function(){var \$c=function(a){this.w=a||[]};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=function(a){this.w|a]=!0};\$c.prototype.set=functi 1E3)].join(".")}, ta=function(a){var b=M.createElement("img");b.width=1;b.height=1;b.src=a;return b},ua=function(){},K=function(a){if(encodeURIComponent instanceof Function)return encodeURIComponent(a);J(28);return a},L=function(a,b) c.type="text/javascript",c.async=!0,c.src=a,d&&(c.onload=d),b&&(c.id=b),a=M.getElementsByTagName("script")[0],a,parentNode.insertBefore(c,a)))},Ud=function(){return*https: "==M.location.protocol},E=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(){return*https: "==M.location.protocol},E=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(){return*https: "==M.location.protocol},E=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(){return*https: "==M.location.protocol},E=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(){return*https: "==M.location.protocol},E=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(a,b){return*https: "==M.location.protocol},E=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(a,b){return*https: "==M.location.protocol},E=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(a,b){return*https: "==M.location.protocol},E=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(a,b){return*https: "==M.location.protocol},E=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(a,b){return*https: "==M.location.protocol},E=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(a,b){return*https: "==M.location.protocol},E=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a))}, Ud=function(a,b){return(a=a.match("[7]),b},parentNode.insertBefore(c,a),b}, Ud=function(a,b){return(a=a.match("[7]),b},pare var c=b.index0f(a);if(5==c||6==c)if(a=b.charAt(c+a.length), "/"==a||":"==a|return; return b}}, za=function(a,b){if(l==b.length&&null!=b[0]&&"object"====typeof b[0])return b[0];for(var c={},d=Math.min(a.length+1,b.length) Ca(a); for (d=0; d<a.length; d++) if (b==a[d]) {d=10; break a} ==a[] ==a function Sa(a){\var b=P(a,gd)||oc()+"/collect",c=P(a,fa);!c&&a.get(Vd)&&(c="beacon");if(c){var d=P(a,Ra),e=a.get(Ia),e=e||ua;"image"==c?wc(b,d,e):"xhr"==c&&wd(b,d,e)||"beacon"==c&&x(b,d,e)||ba(b,d,e)||ese ba(b,P(a,Ra),a.get(Ia));b=a function Hc(a){(0.gaData=0.gaData||{}}.expId&a.set(Nc,(0.gaData=0.gaData||{}).expId);(0.gaData=0.gaData||{}).expVar);var b;var c=a.get(Na);if(c=h(c).pending_experiments){var d=1];for(b in c function yd(a){var b=0.gaDevIds;ka(b)&60!=b.length&a.set("&did",b.join(","),!0)}function vb(a){if(!a.get(Na))throw"abort";};var hd=function(){return Math.round(2147483647*Math.random())},Bd=function(){try{var a=new Uint32Array(1);0}} var ab=function(a,b,c,d){if(void 0!=c)switch(b){case Na:wb.test(c)}var e=\$a(b);e&e.o?e.o(a,b,c,d):a.data.set(b,c,d)},bb=function(a,b,c,d,e){this.name=a;this.F=b;this.Z=d;this.o=e;this.defaultValue=c),\$a=function(a){var b=Qa.get(a)} b){Za.push([new RegExp("""+a+"s"),b)}},T=function(a,b,c,c);Aadad.set(b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=function(a,b,c,d)},db=funct S("appVersion", "av","");S("appId", "aid","");S("appId", "aid","");S("appId", "aid","");S("appInstallerId", "aid","");S("exDescription", "exd");S("exFatal", "exf");var Nc=S("expId", "xid"),Oc=S("expVar", "xvar"),me=S("exp"),Rc=S("utma", "utma"),Sc=S("utmz", "utmz"),Tc=S("var ld=S("usage", "u"),Gd=S("_um");S("forceSSL",void 0,void 0,function(){return Ba},function(a,b,c){J(34);Ba=!!c}};var ed=S("_j1","jid"),ia=S("_j2","gjid");cb("\\&(.*)",function(a){var b=new bb(a[0],a[1]),c=yc[a[0].substring(1));cb("\\alpha", "aid", "bid", "bid", "aid", "bid", "bid", "aid", "bid", "bid" var (D=T("_oot"), dd=S("previewTask"), Rb=S("checkProtocolTask"), mb=S("walidationTask"), Nb=S("eheckStorageTask"), Uc=S("nistoryImportTask"), Tb=S("sampleTask"), Nb=S("bulldHtTask"), Xb=S("sendHitTask"), Xb=S("sendHitT aa(b);b=0<[b,et(kb),get(kb),get(kb)],length;(c||b)&66gc(function(b){a.send(c?*timing*.pi)})}};var hc=11,mc=function(a){*cookie*==P(a,ac)&c(ma(a,0,U),a.get(ja)&6ma(a,I,la,864E5))},ma=function(a,b,c,d){var e=nd(a,b);if(e){c=P(a,c)}} d)){hc=!0;return}a.data.set(W, "auto")}}else a.get(ja)||J(54)},nc=function(a){if("cookie"==P(a,ac)&&(mc(a),lhc))throw"abort";},Yc=function(a){if(a.get(Wc)){var b=P(a,\b)}}(a.get(Wc)){var b=P(a,\b)}|xa(),d=Xc("_utma",c,b);d&&(J(19),a.set(Tc,(new))throw"abort";}); d=0;d<b.length;d+){var e;e=b[d].split(".");var g=e.shift();("GAI"==g||"1"==g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"==g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"==g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"==g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"==g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;("GAI"==g||"1"=g)&&i<e.length?(g=e.shift(),;(" (e=[l],g=l.H[c]):l.H[c]==g66e.push(l)}return 0<d.length?d:e),lc=function(a){feturn 0==a.index0f(".")}?a.substr(l):a},kc=function(a){if(la|return"/";l<a.length66a.lastIndex0f("/")==a.length-166(a=a.substr(0,a.length-1));0!=a.index0f(Dc.prototype.ca=function(a,b){if(a.tagName}{if("a"==a.tagName.toLowerCase())}{a.href66(a.href=qd(this,a.href,b));return}if("form"==a.tagName.toLowerCase())return rd(this,a)}if("string"==typeof a)return qd(this,a,b)}; var qd=function(a,b,c){var d=pd.exec(b);d&&3<=d.length&&(b=d[1]+(d[3]?d[2]+d[3]:"));a=a.target.get("linkerParam");var e=b.indexOf("?"),d=b.indexOf("#");c?b=(-1==d?"#":"6")+a:(c=-1==e?"?":"6",b=-1==d?b+(c+a):b.substring(0,d)+c+a+b. c.setAttribute("type", "hidden");c.setAttribute("name", "ga");c.setAttribute("value",a);b.appendChild(c)}else"post"==b.method.toLowerCase()&&(b.action=qd(a,b.action))};

Dc.prototype.S=function(a,b,c){function d(c){try{c=c||0.event;var d;a:{var g=c.target||c.srcElement;for(c=100;g&&ec;){if(g.href&&g.nodeName.match(/^a(?:rea)?\$/i))}{d=g;break a}g=g.parentNode;c--}d={}}{"http:"==d.protocol||"https:"== c[]])&Grd(e,b)}});function sd(a,b){if(b==M.location.hostname)return!1;for(var c=0;c<a.length;c++)if(a[c]instanceof RegExp){if(a[c].test(b))return!0}else if(0<=b.indexOf(a[c]))return!0;return!1;var p=/^(GTM|OPT)-[A-Z0-9]+s/,q=/;gd ar:H(ca.responseEnd-ca.requestStart), br:H(l.responseEnd-l.requestStart), br:H(l.responseEnd-l.requestStart), bc:H(l.connectEnd-l.connectStart), bc:H(l.connectStart), bc:H(l.co | Control | Cont "utm_campaign")||D[b[c], "utm_source")||D[b[c], "utm_medium")||D[b[c], "utm_term")||D[b[c], "utm_content")||D[b[c], "gclid")||D[b[c], "gclid"]||D[b[c], "gcl if(this.g66(!qa(b)||""==b||lea(a)))throw"abort";if(ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(this.c)||ud(\text{var} u=\text{unition}(a,b,c) \text{b=\||b,gtt(\partial)}; \text{var} \text{unition}(a,b,c,d,e) \text{(inition}(a,b,c,d,e) \ D(a.path, "/plugins/")?!0:!1},ae=function(a){function b(a){var b=(a.hostname||""}.bglit(":")[0].toLowerCase(),c=(a.protocol||"").toLowerCase(),c=1*a.port||("http:"==c?80:"https:"==c?443:"");a=a.pathname||"";D(a,"/")||(a="/"+a);return e[2].lastIndexOf("/"))+"/"+a);c.href=a;d=b(c);return{protocol:(c.protocol||"").toLowerCase(),host:d[0],port:d[1],path:d[2],query:c.search||"",url:a||""}};var Z={ga:function(){Z.f=[]}};Z.ga();Z.D=function(a){var b=Z.J.apply(Z,argumention(),path:d[2],query:c.search||"",url:a||""});var Z={ga:function(),path:d[2],query:c.search||"",url:a||""};var Z={ga:function(),query:c.search||"",url:a||""};var Z={ga:function(),query:c.search||"",url:a||""};var Z={ga:function(),query:c.search||"",url:a||""};var Z={ga:function(),query:c.search||"",url:a||""};var Z={ga:function(),query:c.search||"",url:a||""};var Z={ga:function(),query:c.search||"",url:a||""};var Z={ga:function(),query:c.search||"",url:a||""};var Z={ga:function(),query:c.search||""};var Z={ga:function(),query:c.sear Z.v=function(a){try{if(a.u)a.u.call(0,N.j("t0"));else{var b=a.c==gb?N:N.j(a.c);if(a.A)"t0"!=a.c||N.create.apply(N,a.a);else if(a.ba)N.remove(a.c);else if(b)if(a.i){if(a.ha&&(a.ha=y(a.c,a.a[0],a.X,a.W)),!u(a.a[0],b,a.W))return!0}else N.N=function()("ga"!=gb&5(49);var a=0[gb];if(!a||42!=a.answer){N.!=a&6a.!;N.loaded=:0;var b=0[gb]=n;X("create",b,b.create);X("getBylame",b,b.;),5);X("getBylame",b,b.;),5);X("getBylame",b,b.getAll",b,b.getAll,6);b=pc.prototype;X("get",b,b.get,7);X("b=10;break a}},b=1]b&&(Ba=!0);Ud()||Ba||!Ed(new Od(1E4))||(J(36),Ba=!0);(0.gaplugins=0.gaplugins||{}}).Linker=Dc;b=Dc.prototype;C("linker",Dc);X("decorate",b,b.ca,20);X("autoLink",b,b.S,25);C("displayfeatures",fd);C("adfe

BIG WORD ALERT!

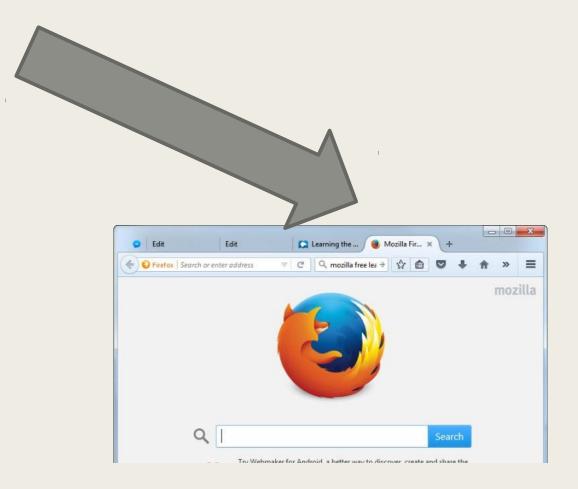


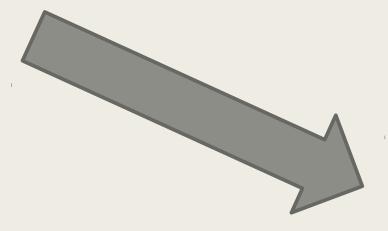
Transpiling

The process of taking the source code written in one language and rewriting it into another langu



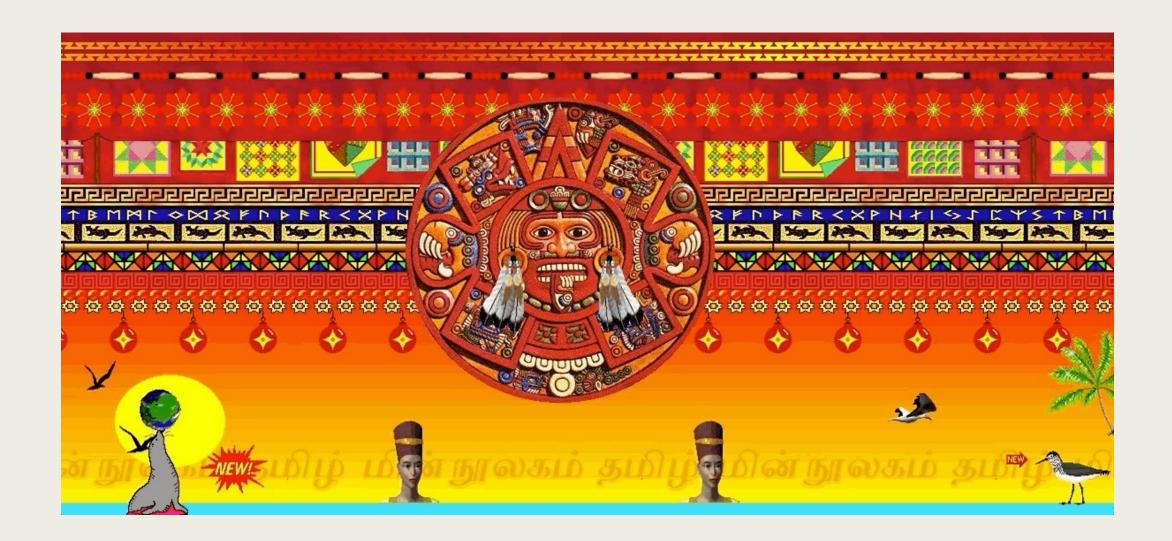
 (function) (var Schmittiona) (this weal) [1] 3cd protatipes sets/montion(a) (bits wellas) is recommended. (a) 1 (bits wellas) is recommended. (bits wellas) is recommended. (bits wellas) is recommended. (bits wellas) is recommended. (bits) is recommende









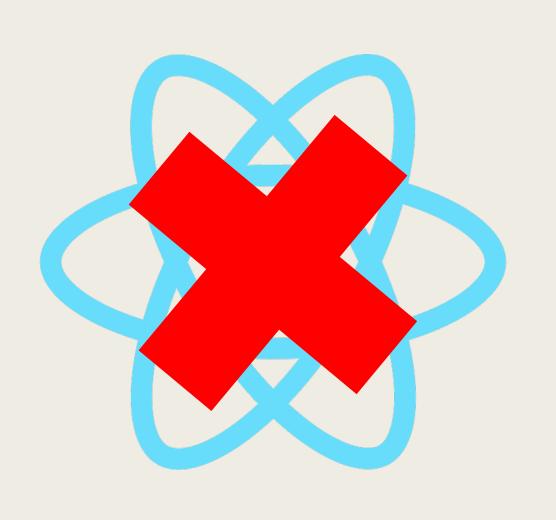


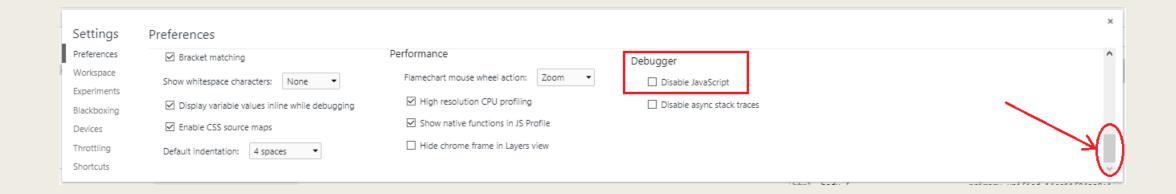
A JavaScript script is not trivial if...

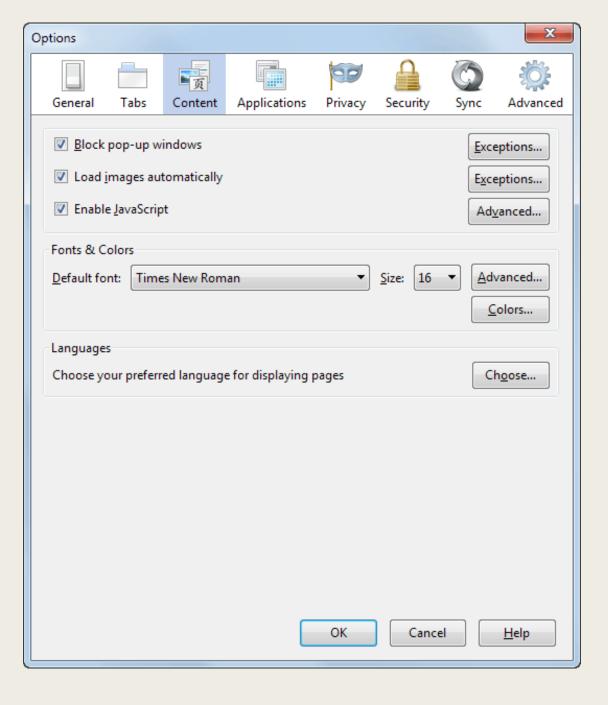
- **I**t is referred to as an external script (from another page).
- It declares an array more than 50 elements long.
- **I**t defines a named entity (function or method) that calls anything other than a primitive.
- It defines a named entity with more than three conditional constructs and loop construction.
- ■code outside of named definitions calls anything but primitives and functions defined further up in the page.
- ■code outside of named definitions contains more than three conditional constructs and loop construction, total.
- **I**t does Ajax calls.
- It alters the DOM.
- It uses dynamic JavaScript constructs that are difficult to analyze without interpreting the program.

forela

Free JavaScript in your browser







The Java Trap



BIG WORD ALERT!



Development Kit

a set of tools, libraries, relevant documentation, code samples, processes, and or guides that allow developers to create software applications on a specific platform.

OPEN JDK / Oracle JDK

OpenJDK

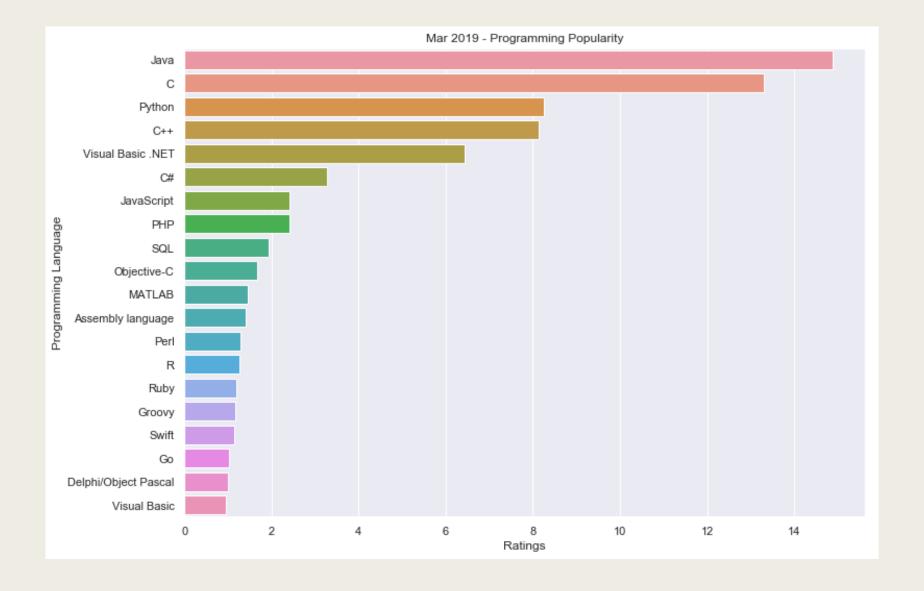


- Oracle's JDK
 - Developers can use it freely in development and testing.
 - If you use it in production, you must pay for it.
- Open JDK
 - Free Software

- Oracle's JDK
 - If you are using Oracle's JDK, you will get updates and supports.
- Open JDK
 - Oracle will not provide any new updates to past versions.



Java SE 10 (JDK 10)



https://www.tiobe.com/tiobe-index/ https://towardsdatascience.com/visualize-programming-language-popularity-using-tiobeindexpy-f8 96400d



OpenJDK

Sakai







































APP 4

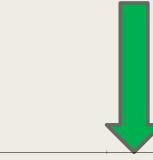




- Your Maps API Implementation must be accessible to the general public without charge and must not require a fee-based subscription or other fee-based restricted access.
- You must conspicuously display the "powered by Google" attribution (and any other attribution(s) required by Google in the Maps APIs Documentation) on or adjacent to the relevant Service search box and Google search results.









MY APPLICATION









MY APPLICATION















MY APPLICATION



Google Analytics



My Licensing



My Licensing



You cannot use my program to benefit Republican candidates or the Republican Party Committee

My Licensing



You cannot use this program to benefit Republican candidates or the Republican Party Committee

What I Learned

- Ensuring your applications provide free access to their APIs is critical for the development of free software. If you are using an API that is not a free, no one can use your program freely. Since there are so many interconnected devises, it is easy for your software to get "infected". To prevent it from "infecting" other people, you must take responsibility and do an audit through your integrations.
- It's not enough to provide access to code. You must provide it in the original framework that you wrote it in, not a transpiled version that is obscured.
- It is more important to protect a user's freedom rather than protecting how your application will be used.

