4 Google Maps

There are innumerable occasions in our lives when we need to refer to maps. It may be to get directions to a particular place, find the best possible route by road / public transport / flight or maybe to locate certain hotels / businesses / schools close to your residence or someplace where you may be thinking of going on a holiday / business trip / relocating. Whatever the reason may be, a detailed map is always handy. There is a lot of information that can be obtained from maps and this is where the **Google Maps** will prove to be a boon to you.

4.1 About Google Maps

Google Maps is a free browser-based web mapping service provided by Google with many powerful and user-friendly features. It not only shows you the basic geographical map of an area, it also provides local business information, contact information, driving directions, route planner and satellite imagery of the area. For some cities, the *Transit* service is also available wherein the public transportation routes are shown.

Google Maps also integrates **Google Places** which is a free listing directory service provided by Google. Businesses can list their details like address, business hours, telephone numbers etc. in addition to pinpointing their location on Google Maps. Google Places is discussed in Chapter 5.

A link to Google Maps i.e. **Maps** is available on the top navigation of your Google homepage. You can also directly reach the page at *http://maps.google.com*.

If you want to use the Google Maps for a general purpose, that is, to search for directions, or locate places, business or routes etc, you are not required to sign in to your account. You can use the features and access maps of all kinds and places all over the world, similar to Google Search page, with absolute ease right from the home page of Google Maps. However, if you want to create your own maps, share places with others, or save certain maps for reference later, you will need to sign in to your account.

When you open Google Maps for the first time the Maps will display your country in a panned out view. You can either use the zoom controls to zoom in to the desired location or you just enter the city / town you want to look for in the search bar above the map. For example, when we enter "Mumbai", we get the map of Mumbai as shown in figure 4.1 below.

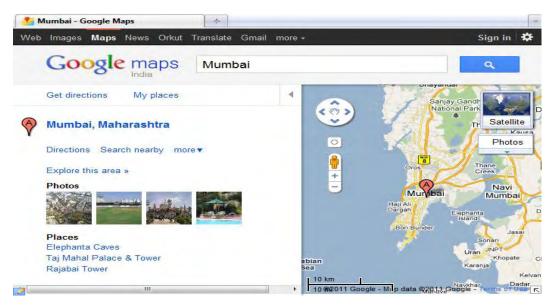


Figure 4.1 Screenshot of Google Maps

In the figure 4.1, we can see the search bar at the top of the page where we have entered our query (Mumbai), and the result of this query is clearly indicated with a **Red Marker** marked "A" on the map.



The Maps page is divided into two panels, the **left panel** and the **right panel**. The left panel is the area for showing you the search results along with all the relevant information related to it, and the right panel shows you the location of your search results marked with appropriate markers on the map.

In this case, Mumbai being a large city, the left panel shows some pictures and lists a few places of tourist interest as well. We will learn more about the left panel later. The right panel (showing the map) contains certain navigation controls on top having the *left, right, top* and *down arrows* marked inside a circle, these are used for moving the view along the map in the desired direction. Google Maps are also "draggable", which means that you can *drag* the visible area of the map in any direction by moving the mouse while keeping the left mouse button pressed, instead of using the navigation controls.

Below the navigation controls is an icon (small square with a small circle inside it) for **My Location**, which is used to indicate your location on the map. Below this icon, is the zoom control, with a yellow figure at the top (called the **Pegman**, which can be dragged to any location on the map to switch to the *street view* of that location. Please note that *Street view* is available in only select cities.

At the left bottom of the Maps panel is the **Scale of the Map** that changes as you zoom in or pan out. On the extreme right bottom of the map is a square button with an arrow. This is the option for seeing the overview of your current map with respect to a larger area.



Figure 4.2 Maps Overview Option

The **overview** option gives you a more localised view of your search and the area visible on the map is placed inside a purple box, as shown in figure 4.2 on the left.

The overview provides a reference with respect to a larger area and is especially helpful when you are zoomed in a lot and do not have many known reference points.

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When you are navigating the displayed map, the purple box will keep moving in the overview accordingly. Similarly, moving the purple box within the overview will change the area visible on the map.

The overview option can be closed anytime by clicking on the overview button.

At the top right side of the panel is a box with the tag "Satellite". This box allows you to toggle the basic map with a satellite map. Under this satellite box is another rectangular box with a dropdown menu box. It may be showing either **Photos** or **Traffic** depending on your location. This box allows you to choose layers, which are nothing but location specific information.

This dropdown menu box shows you the various layers that are available for the area that you are viewing. The various options available are shown in figure 4.3 on the left. Remember that only the layers available in your area of interest are displayed and the *more* button displays all the layers, which may be available in select areas.

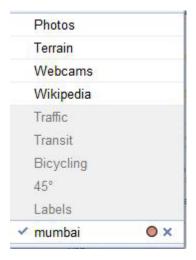


Figure 4.3 Drop Down Menu

- The **Photos** layer shows all the photos taken in the area, from around the world, superimposed on the map. As you zoom in to the area the photos become more relevant. If you want to view a larger image, simply click on the photo.
- The Terrain layer shows the 3D elevation view of the area highlighting mountains, creeks etc
- The **Webcams** layer shows the webcam snapshot of specific locations taken in the last fifteen minutes. These are public webcams located at fixed places. Clicking on the thumbnail will open a bigger picture.
- The **Wikipedia** layer shows geotagged articles from wikipedia about your search term. The places for which articles are available are marked with a 'W'.
- The **Traffic** layer shows the traffic updates to enable you to find the best route to your destination. The traffic layer is available for select cities and becomes visible automatically when you open the area where it is available. Traffic conditions are indicated by a colour scheme, as shown in figure 4.4 below, superimposed on the map.



Figure 4.4 Color Scheme for Live Traffic Updates

- The Transit layer shows the public transportation available in your area. This option is also available only in select cities.
- The **Bicycling** layer helps you to find the biking trails in your area. This layer again is available only in select areas.
- The Labels layer is on by default and shows the names of streets and the names of the places of interest etc.

Having learned about the controls and options available in the right hand Maps panel, let us now see more ways we can use the Maps to our benefit. For this let us concentrate on the **left panel**.

4.2 The Search Feature in Maps

We have already seen that we can use the search bar on the Google Maps page to search for a desired location. In the same manner, we can look for businesses, local addresses, schools etc. Just type in the query and Google Maps does the rest. The search results are listed in the left panel sequentially indicated by an alphabet starting with "A" and the corresponding results are indicated with a marker on the map. The markers used may be as follows: -

The red colour marker is used for indicating the location queried by you. This same marker in blue indicates a user-generated content. Green colour marker is used to indicate destination points if you are trying to get directions.

① If the location indicated is "approximate" then this marker is used. Smaller red circles indicate all results and not just the most relevant results, which have bigger markers as explained above.

By clicking on any marker an **Info Window** opens that gives information about the location. The information may contain address, contact details, photos, reviews etc. Info windows can be expanded by clicking on the title link or a "+" sign, if it appears in the window.

Let us see an example for schools in Thane, Maharashtra. We enter the text **Schools in Thane**, **Mumbai** in the search bar. The map, as shown in figure 4.5 below, appears.

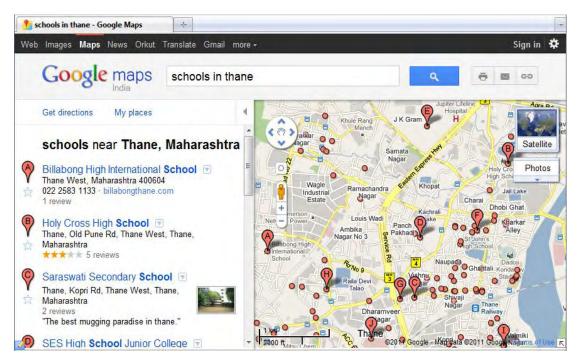


Figure 4.5 Screenshot of Search Results For "Schools in Thane"

The figure 4.5 shows all the popular schools in Thane with big red colour markers. The small red circular markers indicate kindergartens, tuition classes, colleges and other educational establishments. In the left panel, after the results list you have the option to go the next page. Doing this will present new results on the map.



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In a similar manner you can search for anything you want like department stores, pizza suppliers, cinema halls etc. and get more information about those.

4.3 Getting Directions

Ok, let's come back to the **left panel** again. At the top of the left panel are two prominent tabs, **Get directions** and **My places**. See figure 4.6 below. "*Get directions*" is a useful feature to find directions or to chart out a route from place **A** to place **B**. If you choose this option you are asked to specify your *starting location* in the field "**A**", and the final *destination* in field "**B**". You can also add multiple points en-route by using the **add destination** tab.

The Google Maps suggests the route between the two locations, which is also displayed in the right panel, and if there is more than one way of getting to your destination all routes are suggested in the left panel. On the Map, the first suggested route is highlighted in purple colour. The other suggested routes are seen if you hover your mouse over the alternate route in the left panel.

The figure 4.6 below shows the route between *Mumbai CST* and *Churchgate* in Mumbai. As can be seen, there are three routes we can take between the two points. The routes are indicated on the left panel along with the distances and approximate time factors involved. The first option is highlighted in the map and if you hover the mouse on the second option a comparison can be seen on the Map. Similarly, you can see the comparison between any two routes. You can also modify the route as per your liking. When you take your mouse cursor on any point on the highlighted route, you get the option to drag the route, as you want it.

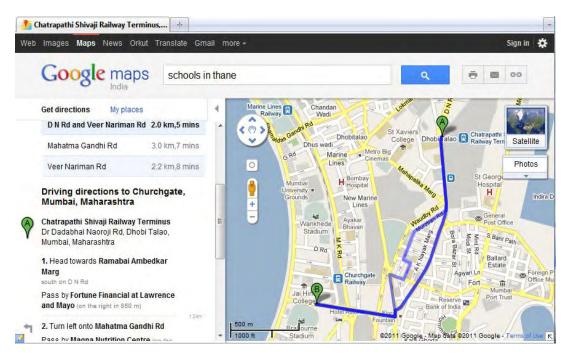


Figure 4.6 Get Directions

Under the suggested routes, you get the driving directions in text from point **A** to point **B**. In the present example, the driving directions from *Mumbai CST* to *Churchgate* is given in the left panel as shown in the figure 4.7 below.

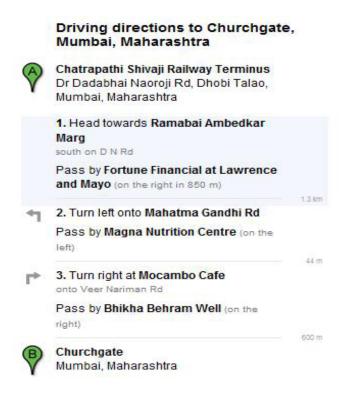


Figure 4.7 Left Panel Shows Driving Directions From Point A to Point B

You can print the directions with or without the map by using the Print button above the map. You can also customize the print by including mini maps for each step.

4.4 Embedding Maps in Blog/Website

Did you know that you can easily embed a map in your website or blog? The link symbol, provided above on the *top right corner* of the map (as can be seen in figures 4.5 and 4.8), can be used to create the HTML code for the map, which can be copied and pasted in your blog or website. This application can be used to present a map indicating the location for your business in the **Contact Us** page of the website.



Figure 4.8 Embed Code for Maps

The size of the map can be changed to your preference by using the "Customize and preview embedded map" link seen below the box with the embed code.



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