Webservice
Developer API

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The Postcodes4u service returns addresses that are specified using a search term. The search can specify a postcode, longitude and latitude or address id.

To access our service you must have a Postcodes4u account or register for a free account

Specific details as to how to query the service in your application are detailed below. This guide is intended for advanced developers who wish to integrate the Postcode4u service into a bespoke application.

Postcode Search

Postcode search returns a list of addresses specified by a postcode

URL: http://services.3xsoftware.co.uk/Search/ById/{FORMAT}?username={USERNAME}&key={KEY}&id={ID}

HTTP Method: GET

This operation supports JSONP responses. The call-back function can be specified using the "callback" Url query parameter.

Parameters

Parameter	Description	Data type	Values
{FORMAT}	The format parameter indicates the format of the data returned from the service. Currently the service will return either XML or JSON	String	'XML' , 'JSON'
{USERNAME}	The username parameter is the username associated with your Postcodes4u account.	String	A valid account username.
{KEY}	The key parameter is the product key that is currently associated with your account.	String	A valid product key e.g. D7JN-2F5T-BM8J-GCAW
{POSTCODE}	The postcode parameter is search term to return a list of addresses from the service.	String	A full or partial UK postcode e.g. LL29 8HT
{CALLBACK}	The callback parameter is the name of function that is executed when the data is returned and is an optional parameter that can only be specified when the format parameter is set to json.		

Example ASP Code

```csharp
private DataSet PostcodeSearch(string searchTerm)
{
    string format = "xml";
    string key = "D7JN-2F5T-BM8J-GCAW";
    string username = "samsin";
    string url = "http://services.3xsoftware.co.uk/search/bypostcode/";
    url += System.Web.HttpUtility.UrlEncode(format);
    url += "?username=" + System.Web.HttpUtility.UrlEncode(username);
    url += "&key=" + System.Web.HttpUtility.UrlEncode(key);
    url += "&postcode=" + System.Web.HttpUtility.UrlEncode(searchTerm);

    //Create the dataset
    var ds = new DataSet();
    ds.ReadXml(url);

    //Check for an error
    if ((ds.Tables["Error"] != null) && (ds.Tables["Error"].Columns["Description"] != null))
    {
        string exc = ds.Tables["Error"].Rows[0]["Description"].ToString();
        throw new Exception(exc);
    }

    if (ds.Tables["Summary"] != null)
    {
        ds.Tables["Summary"].Constraints.Clear();
    }

    ds.Relations.Clear();
    if (ds.Tables["Summaries"] != null)
    {
        ds.Tables.Remove("Summaries");
    }

    //Return the dataset
    return ds;
    //FYI: The dataset contains the following columns:
    //Id
    //StreetAddress
    //Place
}
```

Longitude & Latitude Search

Longitude and latitude search returns a list of addresses specified by a longitude and latitude

Url: http://services.3xsoftware.co.uk/Search/ByLatLong/{FORMAT}?username={USERNAME}&key={KEY}&lat={LATITUDE}&long={LONGITUDE}

HTTP Method: GET

This operation supports JSONP responses. The callback function can be specified using the"callback" Url query parameter.

Parameters

Parameter	Description	Data type	Values
{FORMAT}	The format parameter indicates the format of the data returned from the service. Currently the service will return either XML or JSON	String	'XML' , 'JSON'
{USERNAME}	The username parameter is the username associated with your Postcodes4u account.	String	A valid account username.
{KEY}	The key parameter is the product key that is currently associated with your account.	String	A valid product key e.g. D7JN-2F5T-BM8J-GCAW
{LATITUDE}	The latitude parameter specified must be a valid latitude that falls within the UK.	String	The latitude parameter specified must be a valid latitude that falls within the UK.
{LONGITUDE}	The longitude parameter is a valid longitude that falls within the UK.	String	The longitude parameter is a valid longitude that falls within the UK.

Example ASP Code

```csharp
private DataSet LongLatSearch(string longitude, string latitude)
{
        string format = "xml";
        string key = "D7JN-2F5T-BM8J-GCAW";
        string username = "samsin";
        string url = "http://services.3xsoftware.co.uk/search/bylatlong/";
        url += System.Web.HttpUtility.UrlEncode(format);
        url += "?username=" + System.Web.HttpUtility.UrlEncode(username);
        url += "&key=" + System.Web.HttpUtility.UrlEncode(key);
        url += "&lat=" + System.Web.HttpUtility.UrlEncode(latitude);
        url += "&long=" + System.Web.HttpUtility.UrlEncode(longitude);

        //Create the dataset
        var ds = new DataSet();
        ds.ReadXml(url);
        //Check for an error
        if ((ds.Tables["Error"] != null)
        &&
        (ds.Tables["Error"].Columns["Description"] != null))
        {
            string exc = ds.Tables["Error"].Rows[0]
            ["Description"].ToString();
            throw new Exception(exc);
        }
        if (ds.Tables["Summary"] != null)
        {
            ds.Tables["Summary"].Constraints.Clear();
        }
        ds.Relations.Clear();
        if (ds.Tables["Summaries"] != null)
        {
            ds.Tables.Remove("Summaries");
        }
        //Return the dataset
        return ds;
        //FYI: The dataset contains the following columns:
        //Id
        //StreetAddress
        //Place
}
```

Address Id Search

Address Id search returns a single address.

URL: *http://services.3xsoftware.co.uk/Search/ById/{FORMAT}?username={USERNAME}&key={KEY}&id={ID}*

HTTP Method: GET

This operation supports JSONP responses. The callback function can be specified using the"callback" Url query parameter.

Parameters

Parameter	Description	Data type	Values
{FORMAT}	The format parameter indicates the format of the data returned from the service. Currently the service will return either XML or JSON	String	'XML' , 'JSON'
{USERNAME}	The username parameter is the username associated with your Postcodes4u account.	String	A valid account username.
{KEY}	The key parameter is the product key that is currently associated with your account.	String	A valid product key e.g. D7JN-2F5T-BM8J-GCAW
{ID}	The id parameter is a search term to return a list of addresses from the service. This value is usually returned in the results of a postcode search or a longitude and latitude search and can be submitted to the service to glean more detail regarding a specific address.	String	

Example ASP Code

```
public static Address GetAddressById(decimal postCodeId)
  {
    string format = "xml";
    string key = "D7JN-2F5T-BM8J-GCAW";
    string username = "samsin";
    string url = "http://services.3xsoftware.co.uk/search/byid/";
    url += System.Web.HttpUtility.UrlEncode(format);
    url += "?username=" + System.Web.HttpUtility.UrlEncode(username);
    url += "&key=" + System.Web.HttpUtility.UrlEncode(key);
    url += "&id=" + System.Web.HttpUtility.UrlEncode(postCodeId.ToString());

    //Build the url
    if (!url.StartsWith("http://"))
    {
      url = "http://" + url;
    }
    if (!url.EndsWith("/"))
    {
      url = url + "/";
    }
    //Create the dataset
    var ds = new DataSet();
    ds.ReadXml(url);
    //Check for an error
    if (ds.Tables.Count == 1 && ds.Tables[0].Columns.Count == 4 &&
          ds.Tables[0].Columns[0].ColumnName == "Error")
      throw new Exception(ds.Tables[0].Rows[0].ItemArray[1].ToString());

    DataTable dtAddress = ds.Tables[0];
    if (dtAddress.Rows.Count > 0)
      {
        address.Address1 = dtAddress.Rows[0]["Line1"].ToString();
        address.Address2 = dtAddress.Rows[0]["Line2"].ToString();
        address.City = dtAddress.Rows[0]["PostTown"].ToString();
        if (address.City == address.Address2) address.Address2 = string.Empty;
        var county = dtAddress.Rows[0]["County"] != null
                   ? dtAddress.Rows[0]["County"].ToString() : "";
        var sp = StateProvinceManager.GetStateProvinceByName(county);
        if (sp != null)
        {
            address.StateProvinceId = sp.StateProvinceId;
        }
        address.ZipPostalCode = dtAddress.Rows[0]["Postcode"].ToString();
        address.Company = dtAddress.Rows[0]["Company"].ToString();
      }

      address.CountryId = 80;
      return address;
  }
```