

Setting up the latest Java Baby Simulator

It should be understood that these setup instructions are provided "as is" to assist users in planning the setup of simulation software that was originally released by 3rd party developers a number of years ago. The software was written for use on earlier historically available operating systems and Java configurations, and anyone installing and using the software needs to be aware that there is now no support available for the software or for recovering from any problems that may be caused by installing and using it on a given system. However, the setup notes have been used successfully on a number of system types matching the stated System Requirements, and no serious issues have been found with its use when it is set up as described.

PC System Requirements

- Windows XP, Windows Vista, Windows 7, Windows 8 or Windows 8.1.
- Java SE Runtime version 6 or later installed.

(If this is not already installed, see the section below on "Downloading and installing the Java Runtime").

- For running the simulator offline locally as a freestanding application:

A Windows Desktop resolution set to a minimum of 900 pixels in height.

It may be necessary to auto-hide the Windows Taskbar if it overlaps the simulator display.

- For running the simulator in a Web browser window (offline locally or online):

A Web browser equivalent to Internet Explorer 7 or later;

The browser's Zoom display setting at 100%;

The Windows Desktop resolution at a minimum of 768 pixels in height, but recommended 800 or above; If necessary, run the browser in Full Screen mode (to avoid the need to scroll the applet up and down).

Installation overview

This version of the Baby simulator is a Java applet that may be run in three different configurations:

A) Offline local running as a freestanding Java applet

This is useful when you want to be able to run the simulator offline locally, and without the need to use a Web browser. A disadvantage is that the vertical screen resolution requirements are higher than accessing it through a Web browser window, because the simulator window must all fit on the screen.

B) Offline local running using a Web browser

This is useful when you want to be able to run the simulator offline locally, but in a Web browser. An advantage is that the vertical screen resolution requirements are a bit lower than running it freestanding, because the applet may be scrolled up and down in the Web browser window.

C) Online running from an existing Internet or Intranet Web page

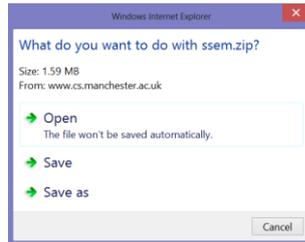
This is useful if you do not want to install code on the local PC, and when you are sure you will always have Internet or Intranet access to a Web page with the Java applet on it whenever you want to run the simulator. One such web page is at <http://www.davidsharp.com/baby/>. You can also use this setup to run the simulator remotely from a network share holding the Baby applet installation on another PC on the local network by using a browser URL to access it. For example: \\192.168.0.106\ssem\index.htm, where ssem is the network share holding the Baby Java installation on the PC at address 192.168.0.106.

Depending on your PC, you may find that one setup works better on your device than another. For example, when running offline locally, the simulator may run better in a local Web browser configuration than running the Java applet in freestanding mode, or vice versa.

The installation setup for each of the three configuration choices is summarised in the following sections.

A) Setup for offline local running as a freestanding Java applet

1. The Java applet itself may be downloaded from David Sharp's archive website by going to the following link: <http://www.davidsharp.com/baby/ssem.zip>.
2. A message similar to the one shown below will appear (the exact message will vary depending on the version of your Operating System and web browser). Choose the option to **Save as**, and store the file in a suitable folder on your PC's local drive, noting where this is.



3. Find the downloaded **SSEM.ZIP** file on your PC's local drive and extract all of its contents (as shown below) into a new folder on your local drive (for example **C:\ssem**).

| Name | Date modified | Type | Size |
|------------|------------------|------------------------|----------|
| help.htm | 09/12/2007 18:26 | HTML Document | 1 KB |
| index.htm | 16/01/2008 17:26 | HTML Document | 3 KB |
| README.txt | 16/01/2008 17:30 | Text Document | 2 KB |
| refman.htm | 16/01/2008 11:47 | HTML Document | 23 KB |
| ssem.css | 09/12/2007 18:27 | Cascading Style She... | 1 KB |
| ssem.jar | 18/01/2008 16:35 | Executable Jar File | 1,750 KB |

4. Once all the files are in the folder, the **ssem.jar** file is the Applet to open in order to start up the simulator locally. You will need to have Java Runtime installed in order to do this:

- If you do not have Java Runtime installed on your PC already:

Download and install the latest version as described below for "*Downloading and installing the Java Runtime*".

- If you are not sure whether you have Java installed:

Try opening **ssem.jar** in the extract folder on your PC by double clicking it in Windows explorer, and it will be indicated if there is no program installed to open it. In that case, cancel the offer that Windows makes to find a program for you, and follow the instructions below for "*Downloading and installing the Java Runtime*".

5. When you have Java Runtime installed on your PC:

You will be able to open the **ssem.jar** file using Windows Explorer. This will start the freestanding version of the Baby simulator. You can also create a Desktop shortcut to the file for easy running later.

Depending on your PC's folder layout and the security settings on the folder that you chose to extract the simulator into, you may find that you need to review your folder permissions so that you can save and load Snapshot and Assembler program files at the chosen location using the simulator.

Note that if you also want to access the simulator offline locally with a Web browser, you will need to configure Java security settings to allow it – see the section below headed "*Setup for offline local running using a Web browser*".

B) Setup for offline local running using a Web browser

This method of running has two stages to the configuration:

1. Install the Java applet locally as described above for “*Setup for offline local running as a freestanding Java applet*”.
2. Configure the Java security settings as needed to allow the browser to access the **index.htm** web page installed on the local PC’s filestore as part of the main local Java applet installation. This file has coded in it a reference to run the **ssem.jar** file as a web page applet whenever the local **index.htm** page is displayed in a browser.

To set up the Java security settings for this to work:

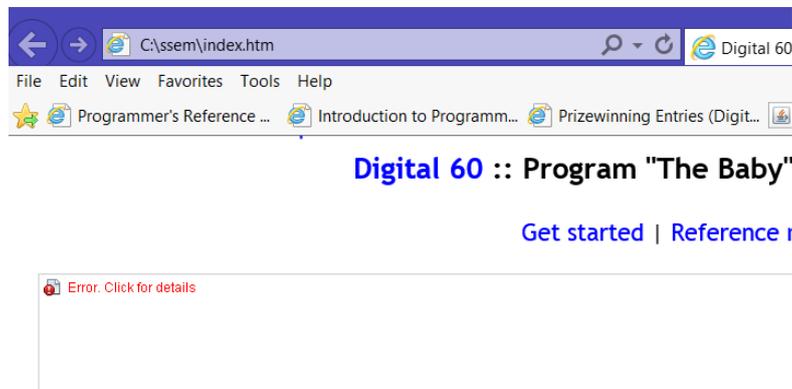
- i. Confirm the full local filestore path to the **index.htm** web page, *including the exact capitalisation of any folder and drive names in the file path*.

The easiest way to determine this is to use Windows Explorer to locate the **index.htm** file in the folder holding the extracted Baby simulator files on your PC (for example, **c:\ssem**), then to double click on it to open in the browser. If prompted, click to **Allow Blocked Content**.

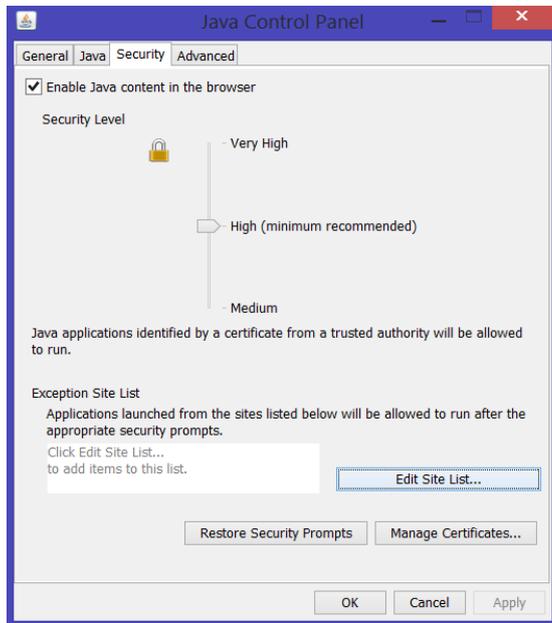
- ii. If (as it usually will) the page fails to load with **Application Blocked** messages, then you will need to configure the Java security settings for the page as in the following steps.

If instead it loads cleanly at this point, and if the Baby simulator appears on the web page, then your Java setup needs no further configuration.

- iii. Before clearing down the **Application Blocked** messages, note the exact file path to the **index.htm** file as shown in the browser URL line, *including the case of all characters in it* – for the example below, this is **C:\ssem\index.htm**.



- iv. Open the **Configure Java** utility.
 - For Window XP, Windows Vista and Windows 7, this is in **Start > All Programs > Java**.
 - For Windows 8 or 8.1, use Search and type in **Configure Java** to find it.
- v. When the **Java Control Panel** opens, click on the **Security** tab, as below, then on **Edit Site List**.



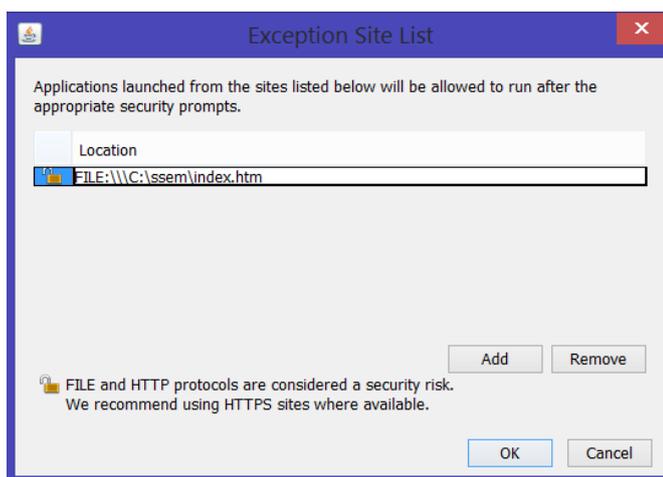
- vi. The **Exceptions Site List** will open.
- vii. Click on **Add**, then in the **Location** box type the characters **FILE:** followed by the exact syntax of the drive path to the index.htm file as you noted it previously in the browser URL (in the example above, **C:\ssem\index.htm**).

This results in an entry needed, for this example, of

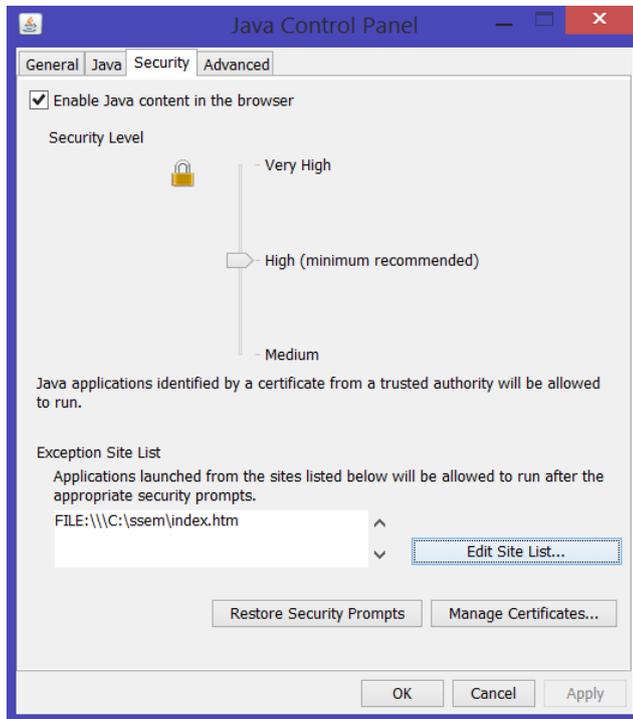
FILE:\\C:\ssem\index.htm

Note again that the URL supplied is case sensitive throughout and the part after the three backslashes must match that appearing in the browser – in this example, if a **c** is typed instead of **C** it will not work.

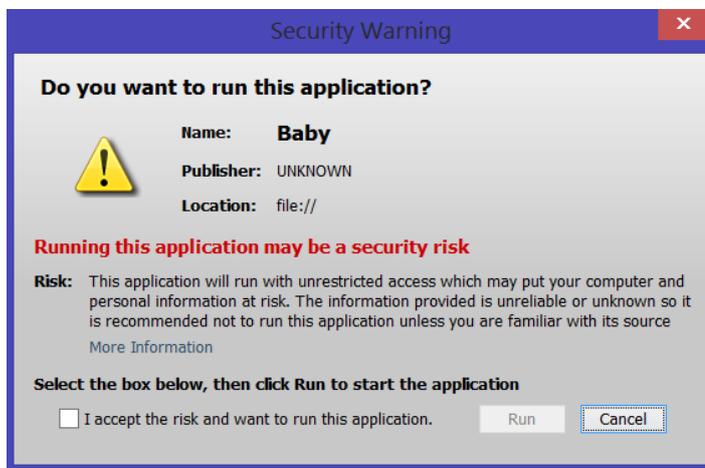
When it appears similar to the entry below (using whatever the path to the file is on your own PC), click on **OK** to return to the main list:



- viii. You may receive a Security Warning now that including a FILE location on the Exception Site List is considered as security risk. If so, click on **Continue**. (Only do this for cases like this where the page location is well known and trusted).
- ix. You will be returned to the first screen, now showing the site included in the current list of excluded sites, as below:



- x. Click on **OK** to complete the setup.
- xi. Confirm access to the page using a fresh Web browser window.
You should now receive a warning message like the one below.
On this, tick the **I accept the risk** check box, and then click **Run**.



- xii. The **index.htm** page should then load normally, and the Baby applet should run from it.

You can then also create a bookmark entry in your browser Favourites to run it directly from the browser in the future, without the need to navigate to it with Windows Explorer.

Depending on your PC's folder layout and the security settings on the folder that you chose to extract the simulator into, you may find that you need to review your folder permissions so that you can save and load Snapshot and Assembler program files at the chosen location using the simulator.

C) Setup for online running from an existing Internet or Intranet Web page

For this mode of running, no local installation of the Baby Applet is required: instead, it just needs an appropriately configured Java SE Runtime security configuration for the target Web page URL, as follows:

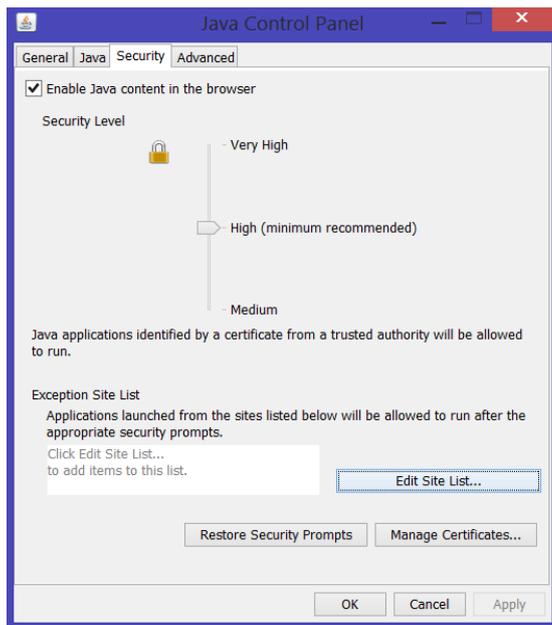
1. Confirm that Java SE Runtime 6 or later is installed. If unsure, you can follow the installation process under “*Downloading and installing the Java Runtime*” below, and it will tell you if already present when it starts installing, at which point you can quit the setup.
2. The latest versions of Java SE will block the running of the Baby applet on an untrusted Web page because the applet is not signed with a known Certificate.

Opening such a Web page with the applet on it will cause the error box “*Application Blocked by Security Settings*” to appear, and the applet will appear on the page as a dotted outline, with a red icon and the word “Error” in it.

You will then need to enable running for the URL of the containing Web page as follows:

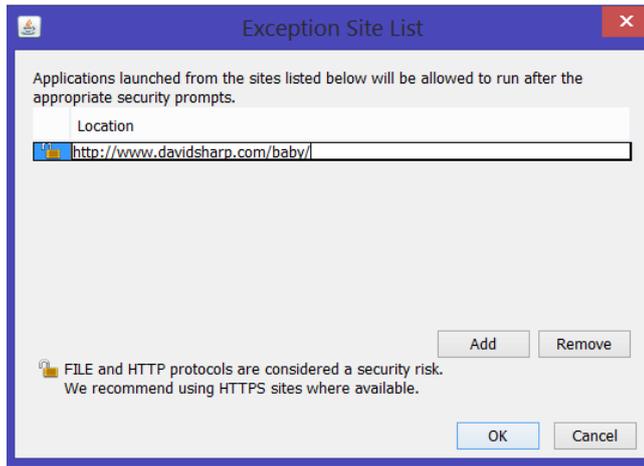
For the example of the target page holding the applet at <http://www.davidsharp.com/baby/>:

- i. Open the **Configure Java** utility.
 - For Window XP, Windows Vista and Windows 7, this is in **Start > All Programs > Java**.
 - For Windows 8 or 8.1, use Search and type in **Configure Java** to find it.
- ii. When the **Java Control Panel** opens, click on the **Security** tab, as below, then on **Edit Site List**, as shown:

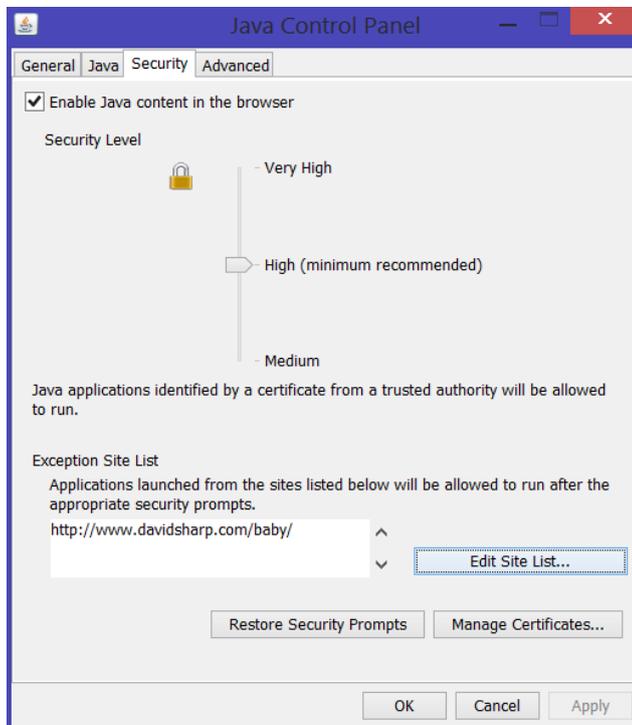


- iii. The **Exceptions Site List** will open. Click on **Add**, then in the **Location** box type the Web page URL containing the Baby applet – in this case <http://www.davidsharp.com/baby/> (shown below). Then click on **OK**.

Note that the URL supplied is case sensitive throughout – it must exactly match the way it appears in the browser’s URL line when accessing that site, or it won’t work. In this case, it all needs to be in lowercase.



- iv. You may receive a Security Warning that including an http location on the Exception Site List is considered as security risk. If so, click on **Continue**. (Only do this for cases like this example where the Web page is well known and trusted).
- v. You will be returned to the first screen, now showing the site in the current list of excluded URLs, as below:

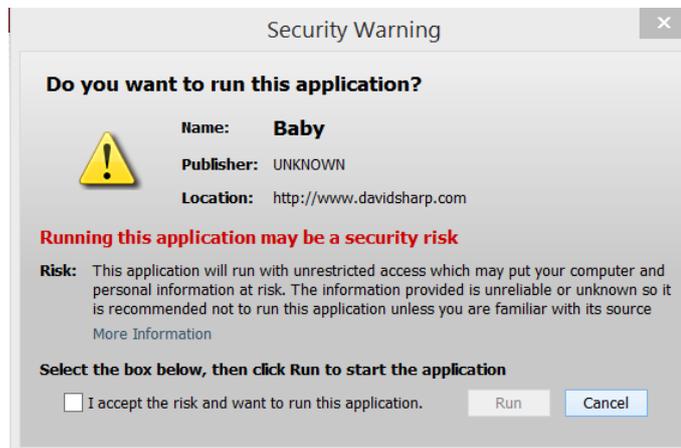


Click on **OK** to complete the setup.

- vi. Confirm access to the just configured URL using a fresh Web browser window.

You should now receive a warning message like the one below.

On this, tick the **I accept the risk** check box, and then click **Run**.



vii. The page should then load normally, and the Baby applet should run from it.

Note that a very similar configuration can be used to enable browser access to the Baby simulator held on a network share holding the Baby applet installation on another PC on the local network.

For example: replacing the above example string *http://www.davidsharp.com/baby/* in the Exception Site List entry by the string *FILE:\\192.168.0.106\ssem\index.htm* will allow browser access to the Baby Java simulator installation in network share *ssem* on the PC at address *192.168.0.106* using the browser URL *\\192.168.0.106\ssem\index.htm*. (In this case, the browser URL used to access the page on the remote PC is prefixed by the characters **FILE:** in the corresponding Exception Site List entry).

Depending on your PC's folder layout and the security settings on them, you may also find that you need to review your folder permissions settings so that you can save and load Snapshot and Assembler program files at the chosen location using the simulator.

Downloading and installing the Java Runtime (if required)

1. Go to <http://java.com/en/download/>.
2. Select the link for "Free Java Download".
3. Click on "Agree and Start Free Download".
4. Choose "Run" to download and install the program directly.
(Alternatively, if you prefer, you can save it to your local drive and execute it manually to install later).