

AppBar</>



What's On:

User Manual

Version 0.4

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Version Control

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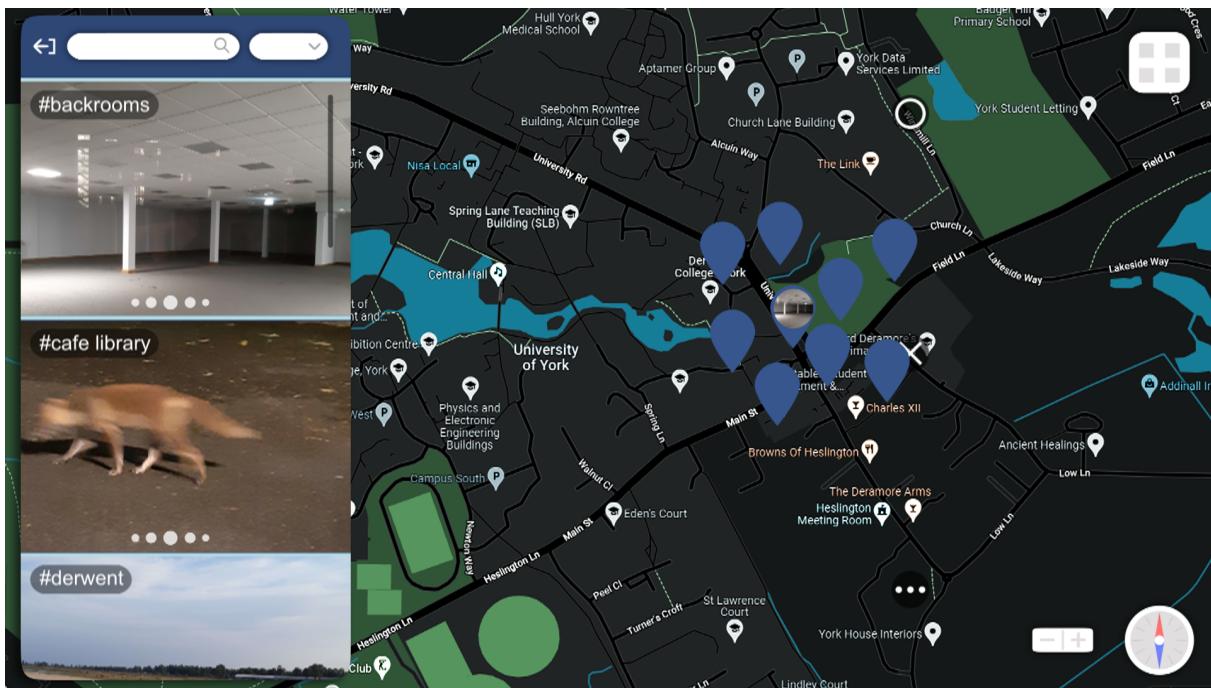


Figure 1: The *What's On:* desktop app.

1 Welcome to *What's On:*

What's On: is a new form of social media, which operates on a local scale. It is designed for social users to be able to use intuitively, without referring to this manual. However, this guide has been constructed to help organisations and verified users of *What's On:* get the most out of the service. Additionally, social users may find this guide helpful if they wish to improve their posts.

What's On: is a product in two parts, the desktop app (shown in Figure 1), and the subscription service. Organisations receive the desktop app at no extra charge when they purchase a subscription, details of which can be found on the AppBar company website. Organisations can freely distribute the app to their users, but the maximum number of user sign-ups available changes depending on the subscription tier. Additional one-off purchase options are available to have the desktop app re-branded or customised.

Once you have purchased a subscription, the next step is to choose a customised map. The custom map allows you to highlight locations in a way that suits you. Depending on your customisation options this can involve choosing a geographical area within our existing UK map, choosing a custom colour theme for the map, or even working with our graphic designers to create a fully custom map. This can include organisation branding and logos, or custom graphics of buildings and geographical features.

2 Installation

The *What's On:* app requires two components to be set up and running in order to function. The first is the desktop application, which you use to interact with the map and view posts. The second is a server which stores the posts and their multimedia, and delivers them to the app as you use it. In the current version, this server must be run locally on the same device which is

Figure 2: Caption

running the desktop application. In future versions of the software, this server will be web-based and maintained by the AppBar team. When the web-based server is running, the desktop app will automatically connect to the server so long as your device has an internet connection.

2.1 Desktop Application

The desktop app is a Java application which requires the installation of the Java Runtime Environment (Java RE) and VLC media player.

- Java is freely available from <https://www.java.com/en/>.
- VLC media player is freely available from <https://www.videolan.org/vlc/>.

Future versions of *What's On:* will require an internet connection; a WIFI connection to wired broadband or a 4G wireless internet connection is recommended. The social posts may feature audio or video content, so a good connection speed will enable you to get the most out of the app.

Once you have installed Java and VLC, and connected to the internet or a local server, you should be ready to run the app. In the current version, an executable file from which to run the program is not provided. It is necessary to compile the source code in an Integrated Development Environment (IDE) such as Eclipse, from the MainScene.java file in the sceneControl package.

The Eclipse desktop app is freely available to download from:

<https://www.eclipse.org/downloads/>

2.2 Deploying A Local Server

Please note these instructions are based on the macOS operating system. The process should be very similar for other operating systems, though the wording of some menu options may differ slightly.

Open your IDE (Eclipse recommended), and select Import from the File menu. Select “Existing Gradle Project”. Then select the folder containing the server application source code, named ‘server-app’.

2.2.1 Server Application Dependencies

The main dependency you need to install is **Lombok**. Due to Eclipse needing to be made aware of it, this is slightly more complex than just adding the dependency to Gradle. **Go to the Project Lombok website(<https://projectlombok.org/download>)**, and download and run the installer ‘**Lombok.jar**’.

Figure 3: Caption

The final step is to enable something called Annotation Processing in Eclipse, required for Lombok.

Right click on the Server project in Eclipse and click “Properties”.

Finally, go to ‘Java Compiler > Annotation Processing’, and enable “project specific settings” and then ‘annotation processing’. Click apply.

2.2.2 Database & Docker Compose

We now need to get the database running. For this, we use some container software called Docker Compose.

Go to the Docker Website and download Docker Desktop. Run the installer. (<https://www.docker.com/products/docker-desktop/>)

Now, we need to run the Docker Compose file that’s in the repo with Docker, which instructs Docker on all the dependencies and software we want for our server, and sets it all up. This only needs to be done once, and then it can be stopped and started from within the Docker Desktop GUI.

Open Terminal or Command Prompt: To run the Docker Compose file, you will need to use the terminal or command prompt. This step is unavoidable because Docker Desktop doesn’t support running Docker Compose directly from the GUI. On Mac, open the ‘Terminal’ app, and on Windows, open the start menu and search for ‘Command Prompt’.

Navigate to the Directory: In the terminal or command prompt, navigate to the directory where you put the server software repository, as this contains the docker-compose.yml file. You can do this by typing cd /path/to/your/directory (TIP: can do it a folder at a time, with TAB auto-completion. If you are in a folder in the terminal that contains a folder called “server” if you type “cd se” and hit TAB, it will auto-complete).

Run the Docker Compose File: Now that you are in the right directory, you can start your Docker Compose application. Type the following command in your terminal or command prompt and hit Enter: docker-compose up - d

Docker Desktop should now look like this. Make sure mysql8 is running.

Adminer is a web-based application for browsing the database content, useful for verifying the content of the server. You can access Adminer by clicking on the 8081:8080 blue link on the right, which should open it in a browser window. To verify the database is working, click it now. You should see a login screen like the one on the right. Credentials are:

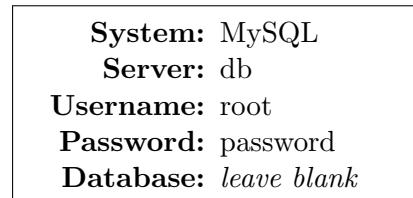


Figure 4: Caption

You will see the screen on the right. If you do not see the Database “server-app-db” listed, click “Create database”, enter “server-app-db” (it will not work if that is not exact) in the box on the left, leave the other one as is, and click save. You should now be able to run the Server Application from Eclipse from the class “ServerApplication”.

If the server starts successfully, you will see this console readout (look for the “default admin user initialised!” line).

3 The User Interface

The desktop app uses a straightforward user interface which opens to show the organisation’s map. Figure 5 illustrates the basic layout of the desktop app. The map is displayed on the larger central ‘main screen’. You can use your mouse, track-pad or touchscreen to move the map around or zoom in and out.

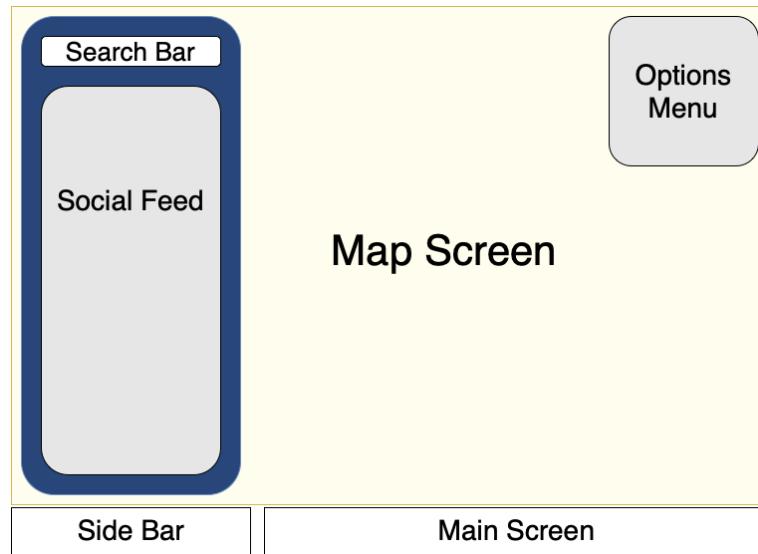


Figure 5: Overview of the user interface.

In the top right-hand corner of the map interface is the Options Menu, from which you can reach the Login window, Upload window and Help.

To the left of the main screen is the sidebar, which contains a search bar and the social feed. The sidebar can be minimised so that the social feed is hidden, allowing the map to fill the screen.

4 *What’s On:* For Organisations

Organisations, businesses or individuals can buy a subscription to the *What’s On:* service. When you buy a subscription, the AppBar team creates a new network which is only open to you. You can then distribute accounts to users up to your user limit, there is no limit to the number of users that can access the app without an account.



Figure 6: A map showing just the central area of the city of York, UK. This is the map used by *What's On: YUSU* network.

Users with accounts can leave social posts (with videos, photos, audio, text and graphics), on events created by accounts you have verified. Users without accounts can still use the app to view social posts by other users, however, an account is required to post them. Using this system, you can limit who is able to post publicly, making the network easier to moderate and control.

4.1 Creating Your Map

Each subscription to *What's On:* entitles you to a custom map, such as the one shown in Figure 6. The custom map allows you to highlight locations in a way that suits you. Any subscription will enable you to use a custom area within our standard UK map. This map has a good level of local detail for most areas, showing roads, buildings and key landmarks. For many organisations, this map will already have enough detail built in for their user's needs, especially those whose events span a large area such as a town or city centre.

However, for organisations whose events span a smaller geographical area, a greater level of detail may be desired. For example, to display events taking place in different rooms within the same building, the standard map is not detailed enough. Alternatively, you may wish to use the standard map, but with a custom colour scheme and company branding and logos. These features are available to customers who purchase an optional re-branding package. For businesses requiring heavy theming, such as theme parks, packages offering a full redesign of the map visuals are available, allowing *What's On:* to integrate seamlessly with your brand.

4.2 Creating Verified Accounts

Once your unique *What's On:* network has been set up, it's time to start promoting events! If you're a small organisation, promoting a small number of events, it may be possible to conduct promotion yourself. However, for larger organisations such as Students' Unions, which may have many events, multiple verified accounts may be desired.

Only Verified Accounts are able to set up new events for promotion, giving events a time, location and hashtag. Each registered event shows up as a marker on your unique map and is visible to your whole network. All Registered Accounts are then able to create social posts attached to these events. Promoters can start the buzz by posting promotional content about the event, before allowing natural social momentum to take over.

If you own a subscription to *What's On:* you will be given the ability to assign Verified Accounts, up to your user limit. Note that your total user limit includes accounts for both verified and unverified accounts. In the current version, it is not possible to verify accounts from within the app. If you have a local server deployed, this can be done using Adminer (see Section 2.2.2). For assistance with accounts or servers you can contact the AppBar support team at appbarltd+support@gmail.com.

4.3 Growing Your User Base

Each *What's On:* account is given a unique desktop app, which can be downloaded from a unique web address. Anyone with the link can download the desktop app and use it to view posts from Verified Accounts. This makes sure that there are no barriers to access between your users and your event promotions.

Users who frequently access your *What's On:* map to find events may wish to see social posts by other users. These users may also feel motivated to share their excitement by creating posts themselves! Anyone with your *What's On:* app can use the app to create a new account, so long as you have not yet reached your user limit. Once you have reached your user limit you will either need to delete existing accounts or upgrade your subscription to accommodate additional users.

5 *What's On:* For Verified Accounts

If you've received a Verified Account for a *What's On:* network, you have additional features which are not open to all users. Registered users who have not been verified to do so are able to create social posts only to existing events. As a Verified Account holder, you can create new events and hashtags as you require, and then post to them.

Verified Accounts are designed to be used by promoters for and members of the organisation running the *What's On:* network. As a Verified Account holder, you will not have control over managing other accounts or the visual elements of the map or desktop app. However, you will be able to create or remove events, and create detailed and exciting posts to promote them!

The easiest way to add and create new events and posts is using the Upload window. To access the Upload window, click on the Options Menu and select the '+' symbol. A general guide to how to use the Upload window can be found in Section 6.1.

However, more advanced users desiring more control may wish to write in exact values for the placement and scaling of objects in their posts. This can be achieved by writing posts directly using a special XML (Extensible Markup Language) specification. A guide to using XML to create posts is given in Section 5.3

5.1 Creating Events

What's On: is built around events and engagement with them. Each event has an associated hashtag and location, and are represented on the map by event markers.

At the present time, new events cannot be created from within the desktop application, and must be added to the server directly. If you have a local server deployed, this can be done using Adminer (see Section 2.2.2). For assistance with events or servers you can contact the AppBar support team at appbarltd+support@gmail.com .

5.2 How Hashtags Work

Each event on the map must have a unique hashtag. When you create a post, you must assign it a hashtag for an event. Your post will then be visible when the event marker for the assigned event is selected on the map. Alternatively, posts can be found by entering a hashtag into the search-bar. All posts with the same hashtag will be made visible in the sidebar, and available to scroll through after searching.

5.3 Using the XML Schema

Although the *What's On:* app has designed to use a built in Upload window¹ with which you can compose posts, some users may desire additional accuracy and flexibility. It is possible to script post layout with complete accuracy by composing your posts in XML (Extensible Markup Language), conforming to the Project Wide Specification (PWS) standard. The PWS is a collaborative standard developed jointly by AppBar Ltd. and Penelope Ltd.

XML is an easy to use markup language composed mainly of tags, elements and attributes. This guide will show you how to use these to compose your *What's On:* posts.

5.3.1 XML File Requirements

When writing a post using an XML file you will need to:

- Create a new XML file.
- The file can have any name, but must end with the '.xml' file extension.
- Include a standard XML header at the beginning of the file.
- Write the body of the script whilst conforming to the PWS.

All post XML files must begin with the following line:

¹The Upload window is currently under development and has not been included in the most recent version of the application. This feature is intended for release in the summer of 2023.

```
1 <?xml version="1.0" encoding="UTF-8"?>
```

Next, after leaving the next line empty, you must write the first tag, the **presentation** tag:

```
1 <?xml version="1.0" encoding="UTF-8"?>
2
3 <presentation xmlns="urn:SWENG" xmlns:SWENG="https://raw.githubusercontent.com/SWENG-G2/xml_standard/main/standard.xsd">
```

These first two lines *must* be written exactly as shown. The rest of the lines feature customisation specific to your post.

The next tag to write is the **info** tag. You must include an indentation (by pressing the TAB key, or adding four spaces in a row) before writing the info tag, as it is a ‘child’ of the presentation tag.

Next you will write the child tags of the **info** tag: **title**, **author**, **date** and **numslides**.

```
3 <presentation xmlns="urn:SWENG" xmlns:SWENG="https://raw.githubusercontent.com/SWENG-G2/xml_standard/main/standard.xsd">
4   <info>
5     <title>#AnExcitingEvent</title>
6     <author>Jamie Smith</author>
7     <date>2023-06-05</date>
8     <numSlides>1</numSlides>
9   </info>
```

Notice the text in between the markers opening and closing the tags. These are the **elements** belonging to each tag; you should replace these with your own values. Note that the element for **title** must be the hashtag for the event you are posting to, and **numslides** must match the number of slides that you write into your post.

Next you can script the contents of the slides themselves. Similarly to **slide** is a child tag of **presentation**, and so must be written with one level of indentation. The photos, videos, audio, text and graphics you add to your post are added as children of the **slide** tag.

For example, here is a simple slide with just text:

```
10  <slide width="500" height="250" title="1">
11    <text fontName="mono" fontSize="28" colour="000000FF"
12      xCoordinate="100" yCoordinate="100" width="400" height="150">I made an exciting post!</text>
13  </slide>
```

Notice the the element within the ‘**text**’ tag, which describes what the text will say. Inside of the tag itself there are also additional instructions called **attributes**. There are composed of name-value pairs and describe where the text is placed and how it looks. Each multimedia type has its own attributes.

At the end of your XML file you must remember to close the **presentation** tag as shown:

```
13 </presentation>
```

5.3.2 Required Attributes

All multimedia within each slide must be given the following required attributes:

- **xCoordinate** - The horizontal position
- **yCoordinate** - The vertical position (Note that the top of the slide has a yCoordinate of '0', and that the yCoordinate increases in the downward direction)
- **colour** - The colour defined as hexadecimal RGBA²
-

5.3.3 Text

Text is drawn within text boxes of a

5.3.4 Graphics

5.3.5 Images

5.3.6 Video

5.3.7 Audio

5.4 How Users Interact

After you have created a post for a new event, a marker will appear on the map, showing the event's location. This will be publicly visible to all users of the app, including those without a registered account. Users with a Registered or Verified account will then be able to create additional posts associated with your event.

Posts made by Registered Accounts (who are not Verified Accounts) cannot be seen by users without an account. Only posts by Verified Accounts are visible to users without an account (or who are not currently logged in).

6 *What's On:* For Social Users

If you've received an invitation to a *What's On:* network you can download the desktop app for free to see information about upcoming events! Event posts are tied to a physical location as indicated by pins on the map. If you want to engage with the posts yourself and see what other social users on the network are up to, you can make an account from the login window (see Section 6.6).

Once you have a Registered Account you can start creating your own posts, which will appear in the social feed underneath event posts. These will be visible to all registered users who are

²Hexadecimal RGBA colours are written in the following format: RRGGBBAA where RR is red value in hexadeximal, GG the green, and so on. AA defines the 'alpha' channel which controls transparency. You may wish to use an external tool, such as <https://fffuel.co/cccolor/> to help choose colour values.

logged in to their own accounts. User posts can be found on the map by clicking on the pin for an event, where all of the posts are grouped together. The heat map shows how many people have created posts for each event, so the higher the temperature, the more popular an event might be!

6.1 Creating Posts Using the Interface (*feature in development*)

In the most recent release of the *What's On:* desktop app, posts must be made by writing XML scripts and adding them to the app from your device. A guide for how to write XML scripts can be found in Section 5.3. However, there are additional features currently in development to make composing posts easier and more accessible, using a visual interface. This section describes how the new features are planned to function, which you can read now in order to understand how making posts might change in the future.



Figure 7: Opening the Options Menu.

To create your own post on an event, from the main screen, first, click on the Options Menu. Click on the ‘+’ symbol from the pop-up menu to bring up the Upload window. Now you can use the Upload window features to create a post and attach it to an event on the map.

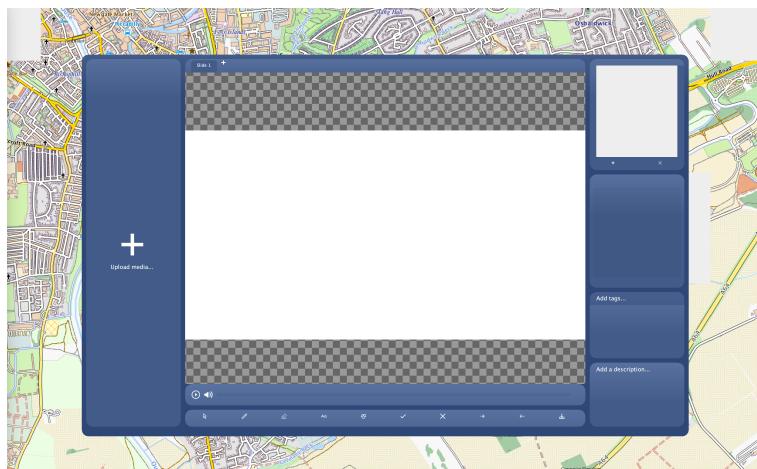


Figure 8: The Upload window.

In the next sections, we'll look at how to add different elements to the presentation in detail. First, however, familiarise yourself with the layout of the Upload window toolbar, which is shown in Figure 9.

The Pointer Tool must be selected whenever you want to move or re-scale something on the canvas. The Draw and Eraser Tools when selected enable you to click and drag on the canvas to draw graphics or erase elements by hand. Clicking on the canvas whilst the Text or Shape Tool will add text or shapes in the place where you click.

The toolbar also contains some function buttons: Upload, Discard, Redo, Undo and Download.

1. The **Upload** button will add your post publicly to your chosen event, and close the Upload window.
2. The **Discard** button will cancel your post and return you to the main screen.
3. The **Redo** button will repeat any changes which have been undone, one by one.
4. The **Undo** button will cancel the most recent change made.
5. The **Download** button will download a copy of your post to your device in XML format.

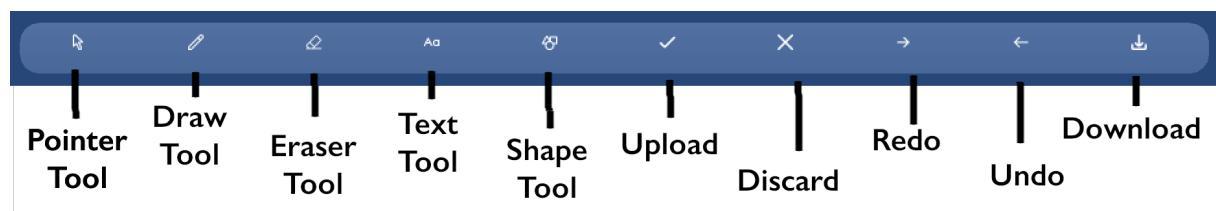


Figure 9: The Upload window toolbar.

6.1.1 Text

To add text to your post, click on the Text Tool icon in the toolbar underneath the post canvas. Next, click anywhere on the post canvas to generate a text box. Shown in Figure 10 is how the Upload window appears immediately after you have added text to the canvas. You can change the text and its attributes (such as font, size and colour), using the attributes editor on the right-hand side of the canvas.

To move your text to a different location, or resize the text box, select the Pointer Tool icon in the toolbar. You can then click and drag on the body of the text box to move it around or click and drag the corner markers to resize the text box.

6.1.2 Graphics

To add graphics to your post, you can use the Draw Tool or the Shape Tool. To use either of these, select their symbol on the lower toolbar (see Figure 9).

When using the Draw Tool, click and drag across the canvas to draw a line. You can then use the Eraser Tool to erase all or a part of any lines that you have drawn. You can also use the Undo button to erase the last line you drew, and the Redo button if you change your mind and want it back again.

When using the Shape Tool, click on the canvas to add a shape in that location. You can then change the shape's properties, such as colour and number of sides, using the attributes editor to the right of the canvas. If you want to move or resize a shape after adding it, select the Pointer

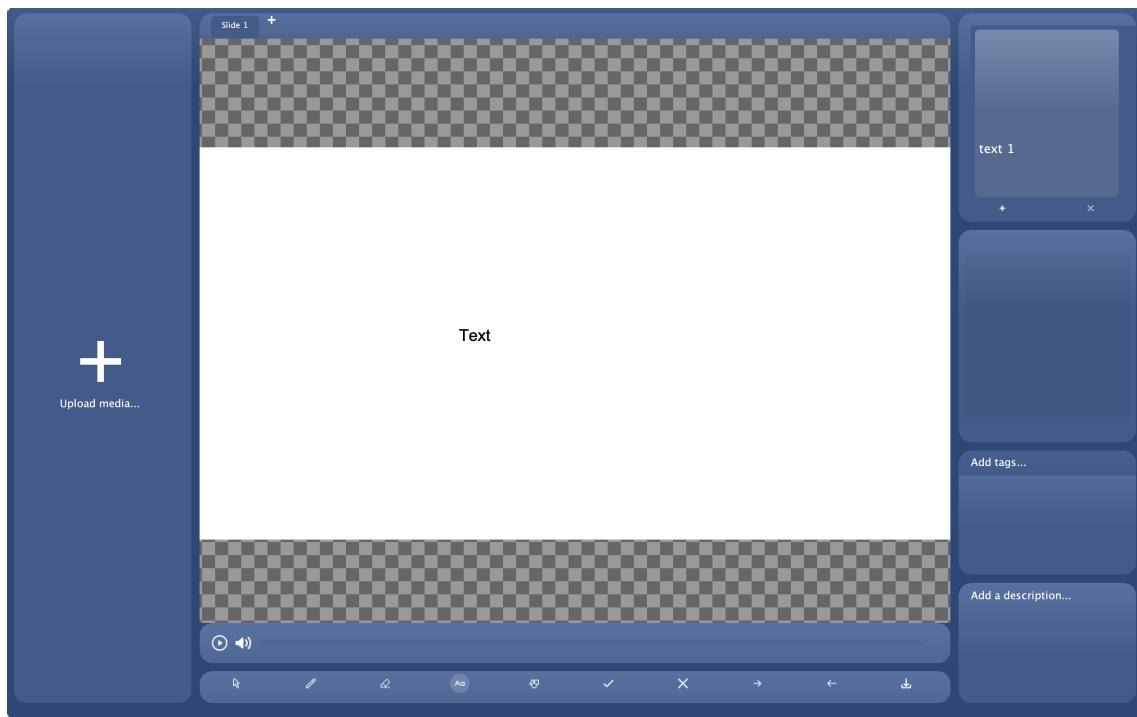


Figure 10: Adding text to your post.

Tool. You can move the shape by clicking and dragging on its body, or resize the shape by dragging the corner markers which appear when it is selected.

6.1.3 Images

To add images to your post, click on the '+ Upload media...' panel on the left of the Upload window. This opens a file explorer, from which you can select a file stored on your device to add to your post.

Once your image has loaded into the Upload window, a thumbnail will appear in the left-hand media bar. You can click and drag on images found here and drop them on the canvas.

Once you have placed an image on the canvas you can use the Pointer Tool to move or resize the image. You can move the image by clicking and dragging it, or resize the image by dragging the corner markers which appear when it is selected.

6.1.4 Video

To add videos to your post, click on the '+ Upload media...' panel on the left of the Upload window. This opens a file explorer, from which you can select a file stored on your device to add to your post.

Once your video has loaded into the Upload window, a thumbnail will appear in the left-hand media bar. You can click and drag on videos found here and drop them on the canvas.

Once you have placed a video on the canvas you can use the Pointer Tool to move or resize it. You can move the video by clicking and dragging it, or resize the video by dragging the corner

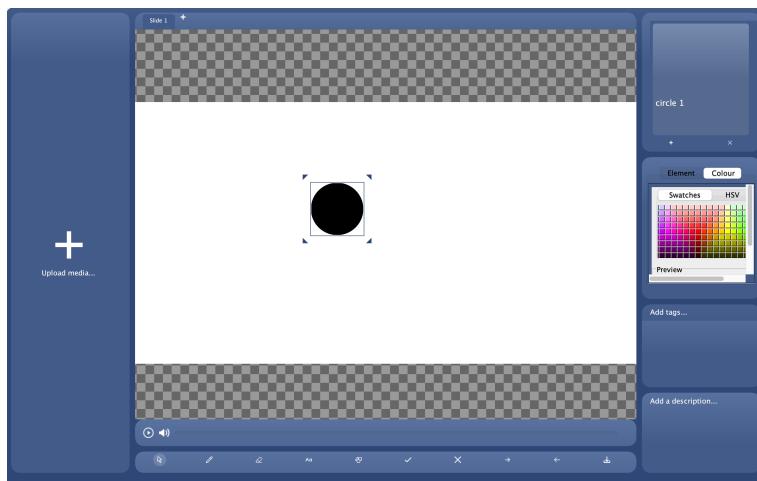


Figure 11: Selecting graphics with the Pointer Tool after adding to the canvas.

markers which appear when it is selected.

6.1.5 Audio

To add audio to your post, click on the ‘+ Upload media...’ panel on the left of the Upload window. This opens a file explorer, from which you can select a file stored on your device to add to your post.

Audio files are added to your post as a graphical speaker icon which viewers can click on to play. You can change the placement of audio icons by dragging them using the Pointer Tool.

6.2 Post-Expiry

When you create a post and add it to the map it will remain on the map until the event is removed by the organiser. By default, events are set to expire soon after they finish, but the event organiser can change this if they wish.

All *What's On:* posts are given an automatic expiry date, after which they will no longer appear on the map. In future releases of the app this will be configurable in the Upload window when uploading a post.

6.3 Using *What's On:* Without An Account

Whenever you open a *What's On:* app, you can access the main map and see verified posts about events. You do not need to have a registered account or be logged in to access these features. However, you will not be able to see posts by users with Registered Accounts or create and share new social posts.

This means that anyone can use the app to find out information about events that are happening in their area and see a representation of popularity using the heat map.

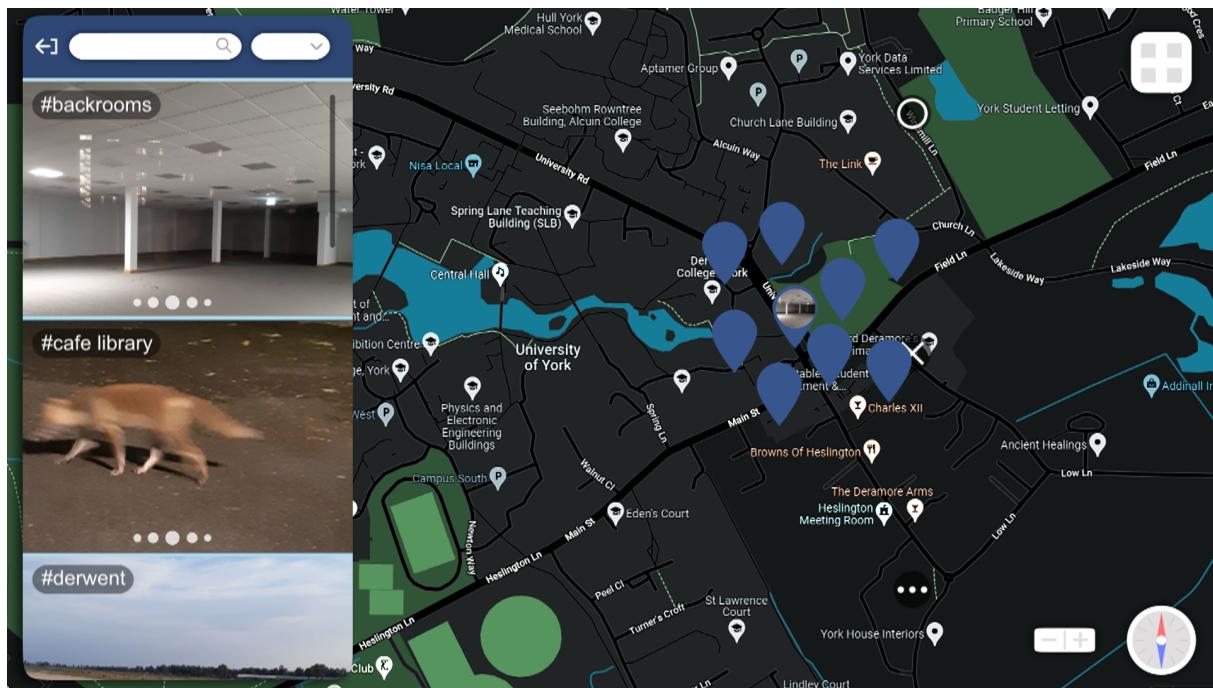


Figure 12: Viewing events posts.

6.4 The *What's On:* Map

When you open a *What's On:* app, you are presented first with the map.

You can navigate the map by clicking and dragging to move around, and by scrolling to zoom in or out. As you move around the app you will see pins in places where events are happening or are scheduled to take place in the future. If you click on a pin, posts promoting each event are shown in the sidebar. Within the sidebar, you can scroll down to see more posts, or click on side arrows to see additional slides for each post.

6.5 Viewing Social Posts

To view posts by users with unverified accounts, it is necessary to be logged in to a Registered Account. If you do not have an account you can create one through the login screen.

6.6 Creating an Account

If you have not yet made an account, you can use the Log In window to create a new one. After using the Options Menu to navigate to the Log In window (see Section ??)

Within the Log In window (as shown in Figure 14) click on the 'Create Account' button, this will open the Create Account screen. Fill out the details requested on the form: e-mail address, first name, last name, username and a password. The Create Account screen is shown in Figure ???. You can then click the Register button. If your registration is successful, you will see a confirmation message. If you then click on 'Back to Log In' button, the username and password boxes should already be filled in with your new account details! Simply click Log In, and now you are ready to browse posts by other Registered Users.

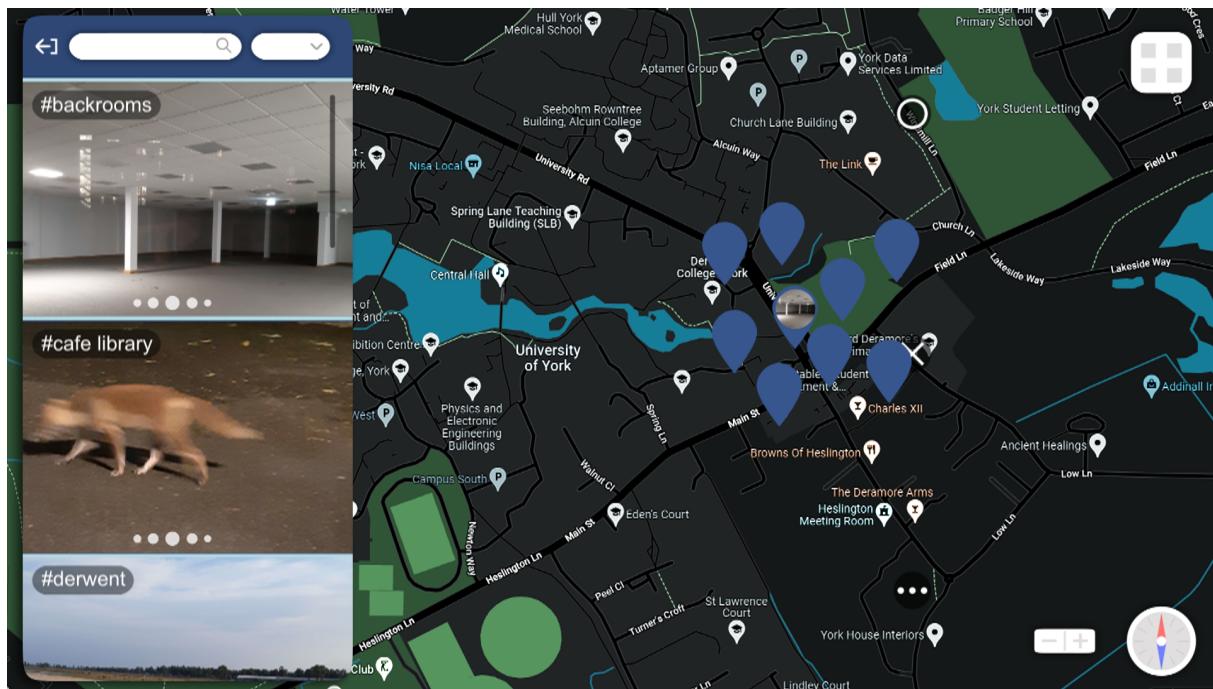


Figure 13: Viewing events posts.

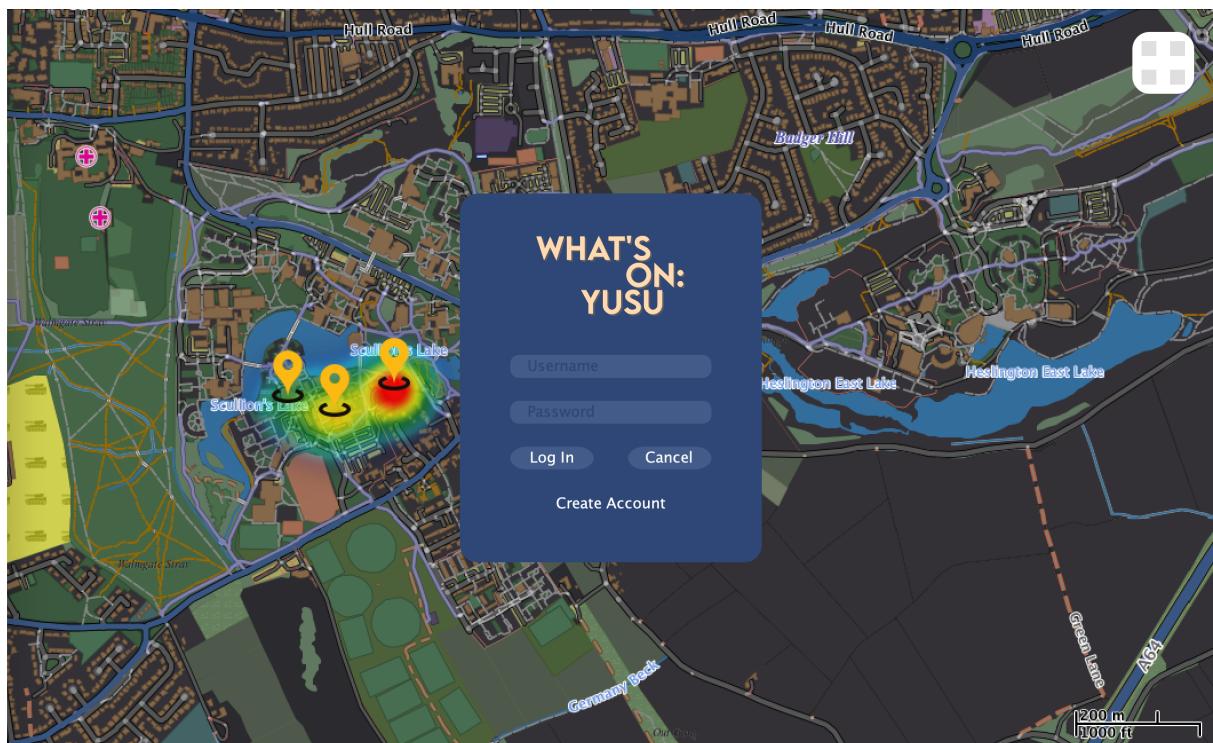


Figure 14: The Log In window.

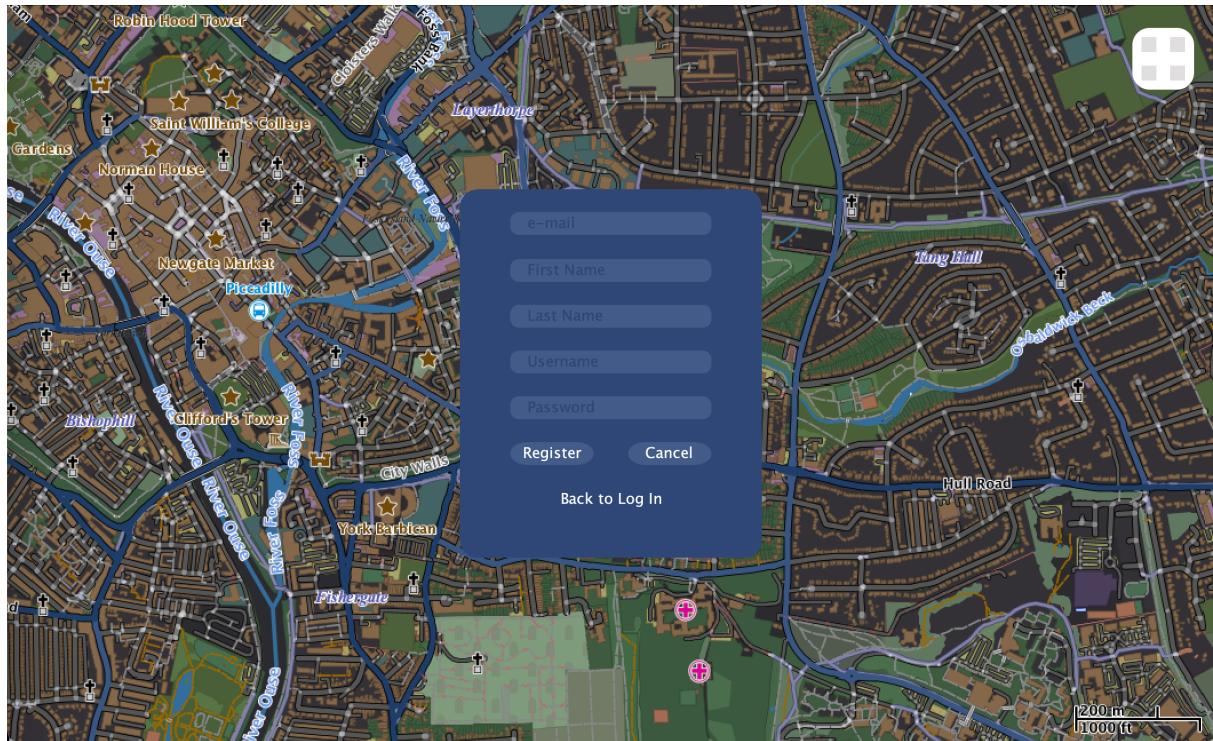


Figure 15: Registering a new account using the Create Account screen.

Please note that you may not be able to register a new account if you are not connected to a *What's On:* server (for example due to losing internet connection), or if the organisation for your *What's On:* community has already reached its maximum number of registered users. Please contact the server administrator, or AppBar support by emailing appbarltd+support@gmail.com

6.7 Managing Your Account

In the current version of *What's On:* it is not possible to manage your account from within the app. If you need to change or delete an account, you will need to contact the organisation that runs your *What's On:* server. If you are running *What's On:* using a local server, this can be done using Adminer (see Section 2.2.2).

For assistance with account management or servers you can contact the AppBar support team at appbarltd+support@gmail.com.

6.8 Help Button

Within the options menu, the help button will bring up this User Manual to explain all the features of the app. There is a chance you are reading this from here (as shown in Figure 16), in which case, hi from AppBar</>! To close this user manual, either click the help button or the options button again. If the text is too small, the window may be too small to read the text. Stretching the app out to a larger size will help.

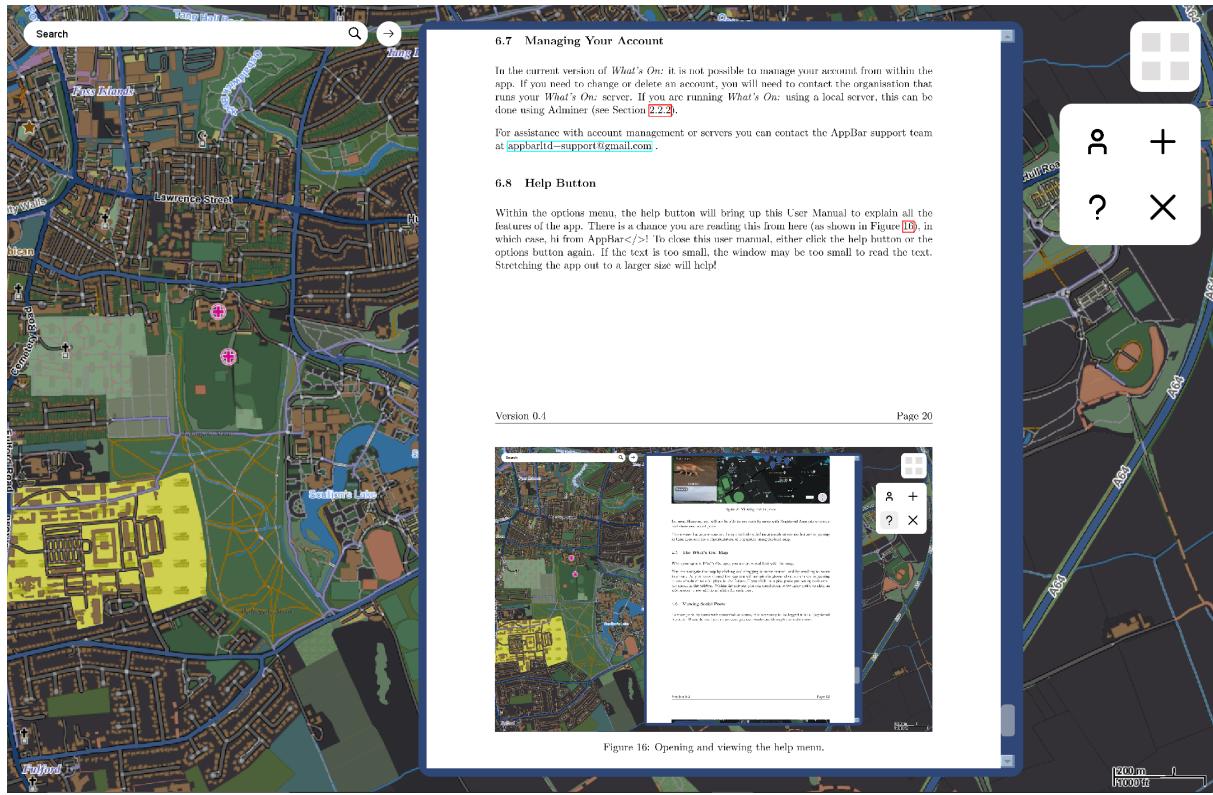


Figure 16: Opening and viewing the help menu.

A The XML Specification