ADVENTIST UNIVERSITY OF CENTRAL AFRICA
GROUP ASSIGNMENT

WEB TECHNOLOGY AND INTERNET
INSY 8322

Group 1 Members :

- Koreï Hissein Djimi 25405
- Eric Foumboulou 24168
- Muhozi Ivan. 25298
- Muhorakeye Honnette 24690
- Makuza Prince 25540
- Mugisha Eric 25459
- MUHOZA GYSSAGARA PRINCE 24417
- Girineza Honore 25431
- Bigwi Romalice
- Igihozo queen wardha 24400
- Mugwaneza Juru Hervé 24975
- Nuwagaba Declan 24747
- Zawadi Vanessa 25211
- Mugabo PRINCE 2470

Internationalization

What is Internationalization?

Internationalization (often abbreviated as i18n) is the process of designing and developing a software application so that it can be easily adapted to various languages, regions, and cultures without requiring major changes to the code. Internationalization allows for a broader audience by accommodating different languages, formats (dates, currencies, etc.), and cultural preferences, ensuring that a single application can meet the needs of users in different parts of the world.

How to Implement Internationalization

1. Text Externalization: Store all user-facing text in external resource files instead of hardcoding it in the code. Each language and region would have its own set of resources that can be loaded as needed.
2. Locale Selection: Provide a way for users to select their locale or automatically detect it from their device settings.
3. Format Adaptation: Ensure that date, time, numbers, and currency formats adapt based on the selected locale. Many frameworks and libraries offer utilities for this purpose.
4. Right-to-Left (RTL) Support: In cases where the language is read from right to left (e.g., Arabic or Hebrew), make sure the layout adjusts appropriately.
5. Encoding and Fonts: Use UTF-8 encoding to handle multilingual text, and select fonts that support the characters of all targeted languages.
6. Testing: Verify that each language is displayed correctly and make adjustments to layout or text length as needed.

Example Project

Here’s a simple internationalized web page project to demonstrate:

HTML (index.html)

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Internationalized Page</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <div id="content"></div>
  <button onclick="setLocale('en')">English</button>
  <button onclick="setLocale('fr')">French</button>
  <script src="i18n.js"></script>
</body>
</html>
```

JavaScript (i18n.js)

```
const translations = {
  en: {
    greeting: "Hello, welcome to our website!",
    instruction: "Select your preferred language."
  },
  fr: {
    greeting: "Bonjour, bienvenue sur notre site!",
    instruction: "Sélectionnez votre langue préférée."
  }
};

function setLocale(locale) {
  const content = document.getElementById("content");
  content.innerHTML = `
    <h1>${translations[locale].greeting}</h1>
    <p>${translations[locale].instruction}</p>
  `;
}
```

CSS (styles.css)

```
body {
  font-family: Arial, sans-serif;
  display: flex;
  justify-content: center;
  align-items: center;
  height: 100vh;
  margin: 0;
  flex-direction: column;
  text-align: center;
}
button {
  margin: 5px;
  padding: 10px;
}
```

How It Works

This project uses a simple JavaScript object for translations. When a user clicks the language button, it loads text in that language dynamically without reloading the page. This shows a basic approach to internationalizing a page.
Name: Koreï Hissein Djimi
ID: 20405