This project contains manifest.json, background.js, screenshot.js, screenshot.html.

***Manifest.json***: The web app manifest is a simple JSON file that tells the browser about your web application and how it should behave when 'installed' on the user's mobile device or desktop. Having a manifest is required by Chrome to show the Add to Home Screen prompt.

{

*"name"*: "ChangeAd",

*"version"*: "1.0.0",

*"description"*: "Change Ad",

*"background"*: {

*"scripts"*: ["background.js"]

  },

*"permissions"*: [

    "contextMenus",

    "tabs",

    "http://\*/\*",

    "https://\*/\*",

    "notifications",

    "activeTab",

    "clipboardRead"

  ],

*"minimum\_chrome\_version"*: "6.0.0.0",

*"icons"*: {

*"16"*: "imageinfo-16.png",

*"48"*: "imageinfo-48.png",

*"128"*: "imageinfo-128.png"

  },

*"web\_accessible\_resources"*: [

    "imageinfo-48.png"

  ],

*"manifest\_version"*: 2

}

***Background.js***: Extensions are event-based programs used to modify or enhance the Chrome browsing experience. Events are browser triggers, such as navigating to a new page, removing a bookmark, or closing a tab. Extensions monitor these events in their background script, then react with specified instructions. But in here background.js is the most important role. Background.js are composed of several functions.

***Context-menu:***

chrome.contextMenus.create({

  id: "context1",

  title: "Set AD Markers",

  contexts: ["frame"]

});

chrome.contextMenus.create({

  id: "context2",

  title: "Copy an AD tag",

  contexts: ["frame"]

});

chrome.contextMenus.create({

  id: "context3",

  title: "Paste the copied AD tag",

  contexts: ["frame"]

});

chrome.contextMenus.create({

  id: "context4",

  title: "Take a screenshot",

  contexts: ["all"]

});

chrome.contextMenus.create({

  id: "context5",

  title: "Clear AD Markers",

  contexts: ["frame"]

});

***Set AD Markers Function:***

if (info.menuItemId === "context1") {

*var* frameUrl = info.frameUrl ? info.frameUrl : "";

*var* codes = 'var allFrames = document.querySelectorAll("iframe");' +

        'for(var i = 0; i < allFrames.length; i++){' +

        'var the\_frame = allFrames[i];' +

        'var overlayer = document.createElement("img");' +

        'var style = document.createAttribute("style");' +

        'var src = document.createAttribute("src");' +

        'src.value = i;' +

        'style.value = "height: 100%; width: 100%;position: absolute; top: 0; left: 0; z-index: 999999999999; background: gray; display: flex; flex-wrap: wrap; justify-content: center; align-items: center;color: rgba(255,255,255,.6); font-size: 2em;";' +

        'overlayer.setAttributeNode(style);' +

        'overlayer.setAttributeNode(src);' +

        'the\_frame.contentWindow.document.getElementsByTagName("body")[0].appendChild(overlayer)' +

        '}';

      chrome.tabs.executeScript(tab.id, { "allFrames": true, "code": codes });

*var* set\_ad = " Successfully set advertisement markers."

      notification\_show(set\_ad);

    }

***Paste AD Function:***

*var* bg = chrome.extension.getBackgroundPage();

*var* helperTextArea = bg.document.getElementById('sandbox');

      if (helperTextArea == null) {

        helperTextArea = bg.document.createElement('textarea');

        document.body.appendChild(helperTextArea);

      }

      helperTextArea.value = '';

      helperTextArea.select();

      bg.document.execCommand("Paste");

      clipboardData = helperTextArea.value;

      helperTextArea.value = '';

*var* codes =

        "var imgs = document.getElementsByTagName('img');" +

        "var srcUrl = unescape('" + escape(info.srcUrl) + "');" +

        "for (var i in imgs) {" +

        "  var img = imgs[i];" +

        "  if (img.src == srcUrl) {" +

        " img.src = '" + clipboardData + "';" +

        "  }" +

        "}";

      chrome.tabs.executeScript(tab.id, { "allFrames": true, "code": codes });

*var* e = "Pasted data!";

      notification\_show(e);

***SCREENSHOT FUNCTION:***

*function* take\_screenshot() {

*var* id = 100;

  chrome.tabs.captureVisibleTab(*function* (*screenshotUrl*) {

*var* viewTabUrl = chrome.extension.getURL('screenshot.html?id=' + id++)

*var* targetId = null;

    chrome.tabs.onUpdated.addListener(*function* listener(*tabId*, *changedProps*) {

      if (tabId != targetId || changedProps.status != "complete")

        return;

      chrome.tabs.onUpdated.removeListener(listener);

*var* views = chrome.extension.getViews();

      for (*var* i = 0; i < views.length; i++) {

*var* view = views[i];

        if (view.location.href == viewTabUrl) {

          view.setScreenshotUrl(screenshotUrl);

          break;

        }

      }

    });

    chrome.tabs.create({ url: viewTabUrl }, *function* (*tab*) {

      targetId = tab.id;

    });

  });

*var* screen = "Screenshot have been saved to computer.";

  notification\_show(screen);

}

NOTIFICATION FUNCTION:

*function* notification\_show(*e*) {

*var* time = /(..)(:..)/.exec(new Date());     // The prettyprinted time.

*var* hour = time[1] % 12 || 12;               // The prettyprinted hour.

*var* period = time[1] < 12 ? 'a.m.' : 'p.m.'; // The period of the day.

  new Notification(hour + time[2] + ' ' + period, {

    icon: 'imageinfo-48.png',

    body: e

  });

}

***DOWNLOAD FUNCTION:***

*function* setScreenshotUrl(*url*) {

    downloadIt(url);

    window.close();

}

*function* downloadIt(*url*) {

*var* today = new Date();

*var* date = today.getFullYear() + '-' + (today.getMonth() + 1) + '-' + today.getDate() + '-' + today.getHours() + '-' + today.getMinutes() + '-' + today.getSeconds();

*var* link = document.createElement('a');

    link.download = date;

    link.href = url

    link.click();

}