# Build Your Teams App with Money-Movement Capability

## Prerequisites (must-haves):

|  |  |
| --- | --- |
| Personal Laptop  Use Personal laptop for unlimited access to softwares/packages that you need.  MS 365 E5 Sandbox Subscription  Using your personal account, create a sandbox subscription & grant admin access to a Teams account. | Register @developer.usbank.com  Using your usbank.com AD account, create your own project, get key and secret, and access to APIs. |

## Prerequisites (highly recommended):

|  |  |
| --- | --- |
| IDE - Visual Studio Code or Visual Studio  Easy IDEs to work with. Install required extensions.  **VS Code Extensions**  Teams Toolkit, Insert GUID  **Database:**  Any RDBMS for persistent storage layer. | node.js/Pure JS/HTML  To program middle-tier & front-end logics.  ngrok  Tunnel the web-application within ngrok subdomain without need for a public IP running on localhost. |

## Deployment strategy:

There are two options to deploy the app:

* Run it locally and tunnel it through a dns-proxy (e.g., ngrok), before using it in Teams.
* Run it on Azure cloud. Your mentor will provide further details on Azure subscription and resources.

This section will be covered in detail along with the sample application.

## U.S. Bank APIs:

|  |  |  |
| --- | --- | --- |
| **Type** | **API** | **Link to documentation & swagger** |
| **Authentication** | <https://sandbox.usbank.com/auth/oauth2/v1/token> |  |
| **RTP** | https://sandbox.usbank.com/money-movement/rtp/v1/credit-transfers | https://developer.usbank.com/api-library/rtp/ver-1.2 |
| **RFP** | https://sandbox.usbank.com/money-movement/rtp/v1/requests-for-payment | https://developer.usbank.com/api-library/rtp-request-for-payment/ver-1.2 |

## Sample Application:

* Building company purchases bunch of equipment from supplier catalog. They are ready to checkout and in a screen where it lists the purchases made and the payment amount that need to be made. They enter their account details and make payment for the supplier through GTM RTP.
* This is just a sample MS Teams app that calls GTM RTP API. Please just use it for reference as how to build MS Teams app and invoke Payments API. Remember, *Whole UI/UX experience needs to be added to cater for Hackathon use cases*.
* Watch this [video](https://usbank-my.sharepoint.com/personal/jeremy_silver_elavon_com/_layouts/15/stream.aspx?id=/personal/jeremy_silver_elavon_com/Documents/Documents/Microsoft/Teams/MockUp-September2022/US%20Bank%20Teams%20App%20Vision%20-%20September%202022.avi&ga=1&OR=Teams-HL&CT=1671120689162&clickparams=eyJBcHBOYW1lIjoiVGVhbXMtRGVza3RvcCIsIkFwcFZlcnNpb24iOiIyOC8yMjExMzAwNDEwMCIsIkhhc0ZlZGVyYXRlZFVzZXIiOmZhbHNlfQ%3D%3D) if you would like to understand a sample user experience layer expected.

## Key Files:

|  |  |
| --- | --- |
| .env | Set environment variables, as needed for the app. |
| package.json | To record runtime dependencies and specify the entry point api js file to run on the server, where API entries are made |
| manifest.template.json | Configurable template in json format. Add custom web page URLs, website redirects, scope at page level etc., Used by package.json. |
| makePackage.js | Uses manifest.template.json and creates two files 🡪 manifest.json & <project>.zip file. Upload this .zip file into Teams to run the web application. |
| teamsHelpers.js | Teams App Initializer JS. |