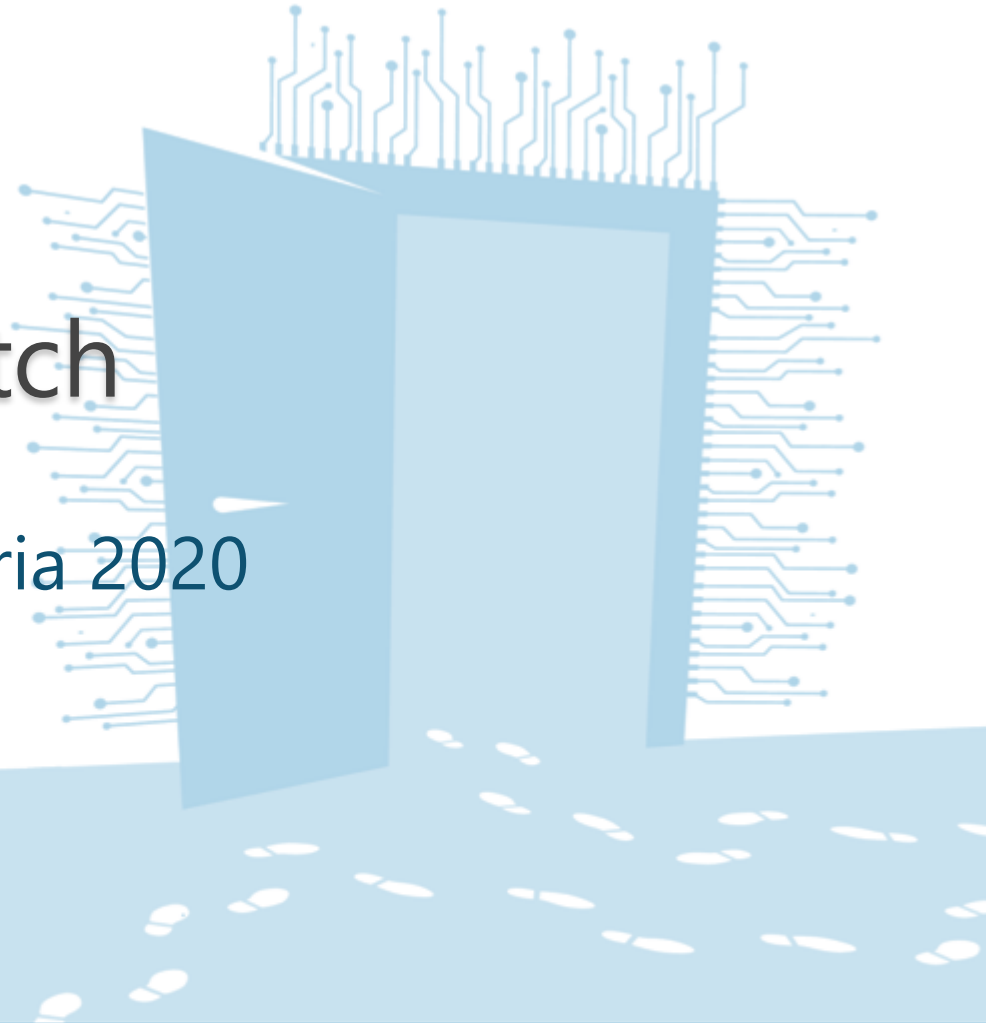


GLOBAL 365 DEVELOPER BOOTCAMP IS POWERED BY:



# Building PowerApp from Scratch

Microsoft 365 Developer BootCamp Bulgaria 2020



Global **Microsoft 365**  
Developer Bootcamp

NOVEMBER 5

by Bulgaria BI & .Net Geeks Group / Azure User Group Bulgaria

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# Speaker Bio

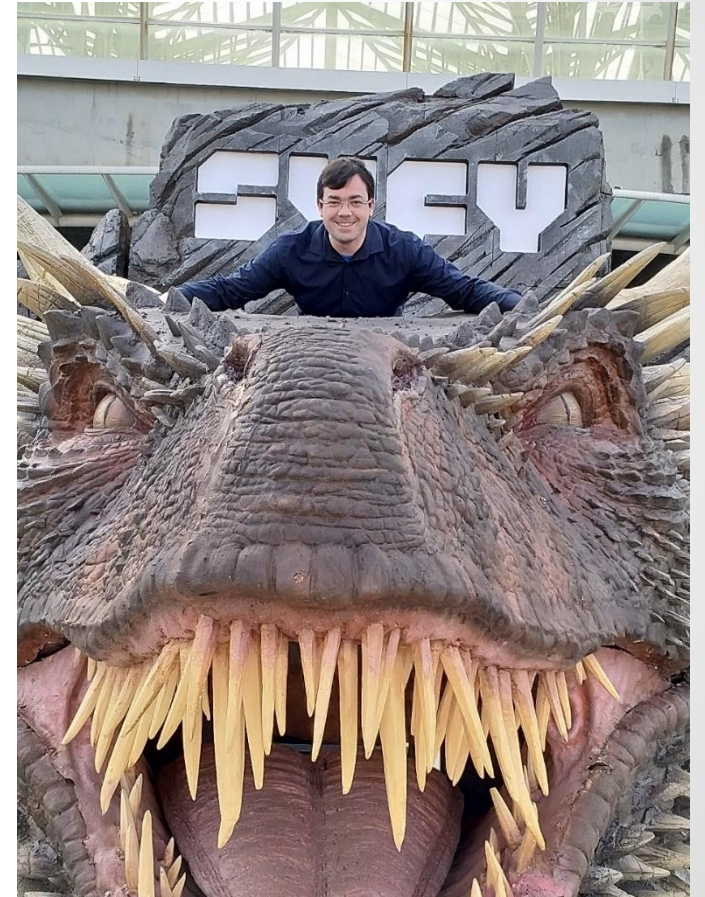
- Ricardo Cabral
- Technical Engineer in Computer Science and also Microsoft Certified Trainer (MCT).
- IT Trainer | IT Consulting.
- I participate, volunteer and speak in community meetings.
- In my free time I'm often spotted at Xbox Live.

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<https://Twitter.com/rramoscabral>



# Agenda

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- Microsoft 365 Developer Program
- Microsoft Power Platform
- Microsoft PowerApps
- Q&A



# Microsoft 365 Developer Program



Global Microsoft 365  
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# Microsoft 365 Developer Program

- Join the Microsoft 365 Developer Program today!
  - <https://developer.microsoft.com/en-us/microsoft-365/dev-program>
- Free, renewable 90-day Microsoft 365 E5 developer subscription
- 25 user licenses for development purposes
- Sample data packs creates 16 fictitious users
- Include All Office 365 apps including but Windows are not included

Microsoft | Microsoft 365 Dev Center | Explore | Resources | Programs | Bootcamps | Developer Certification | All Microsoft | Search | Cart | Sign in

## Join the Microsoft 365 Developer Program today!

Get a free sandbox, tools, and other resources you need to build solutions for the Microsoft 365 platform.

[JOIN NOW >](#)

- Free developer sandbox**  
Get a free, renewable 90-day Microsoft 365 E5 developer subscription.  
[LEARN MORE >](#)
- Sample data packs**  
Automatically configure your sandbox by installing user data and content to help you build your solutions.  
[LEARN MORE >](#)
- Access to experts**  
Access community events to learn from Microsoft 365 experts.  
[LEARN MORE >](#)
- Personalized recommendations**  
Find developer resources quickly from your personalized dashboard.  
[LEARN MORE >](#)



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# Microsoft 365 Developer Program

## How to join

- You need a Microsoft Account to Join
- Your Microsoft Account need first and last name defined

The image shows a composite of three screenshots from the Microsoft 365 Developer Program sign-up process:

- Left Screenshot:** The Microsoft sign-in page. It features the Microsoft logo, a "Sign in" heading, and options for "Email, phone, or Skype", "No account? [Create one!](#)", "Can't access your account?", and "Sign-in options".
- Middle Screenshot:** An error message box titled "We're missing some information". The text reads: "Please add your first and last name to your Microsoft Account at <https://account.microsoft.com/profile> and try again later. It might take a few hours for the change to appear in the system." A "Close" button is at the bottom.
- Right Screenshot:** The "Microsoft 365 Developer Program Signup" form. It includes a welcome message, a "Next" button, and a "Close" button. The form fields are: First Name: Ricardo, Last Name: Cabral, Email: [redacted], Country/Region \*, Company \*, Language preference \* (English). There are two checkboxes: "I accept the terms and conditions of the Microsoft 365 Developer Program..." and "I would like information, tips, and offers about the Microsoft 365 Developer Program." Below the checkboxes is a link to the "privacy statement".



# Microsoft Power Platform





# Power Platform

- Using the Microsoft 365, Dynamics 365 and Azure to extend the capabilities, controls, and functions
- Power Users
  - Who understand their business challenges
    - <https://powerusers.microsoft.com/>

## MEASURE



### Power BI

Business analytics

Analyze data

## ACT

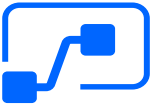


### PowerApps

Application development

Build apps

## AUTOMATE



### Power Automate

Process automation

Automate process

## RESPONSE



### Power Virtual Agents

Intelligent virtual agents

Create virtual agents



# Power Platform Database

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- Common Data Service (CDS)
  - Data storage service that store and manage data
  - Set of entities
  - Entity is a set of records used to store data
- Power Platform use and shares the data on CDS
  - PowerApps environment can have zero or one CDS
- Capacity limitation
  - If you exceed your storage capacity, you'll receive notifications alerting you to the over-capacity usage
  - Its possible to buy storage using Microsoft 365 Common Data Service License at Microsoft 365 admin center



# Access data

---

- Common Data Service
- Connectors to connect to other services
  - A connector is a proxy or a wrapper around an API that allows the underlying service to talk to Power Platform
- Standard Connectors
  - Use common cloud services, open protocols or Microsoft Services
- Premium Connectors
  - Advanced service content, property services, external applications (require subscription with service provider)
- Preview connectors
  - Connectors that can change functionality (triggers and actions) at any time
- Custom connectors
  - You can create your own connector with its own triggers and actions.
- On-premises Data Gateway (Power BI, Power Apps, and Power Automate)

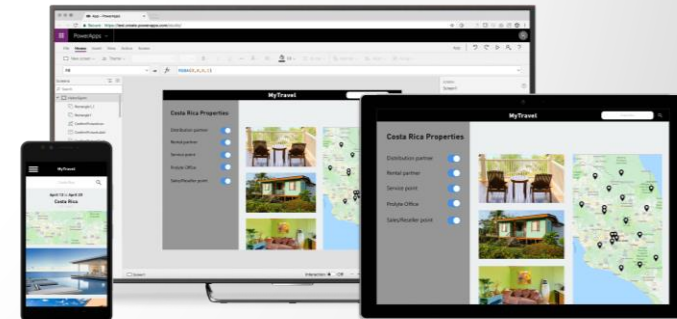


# Microsoft Power Apps



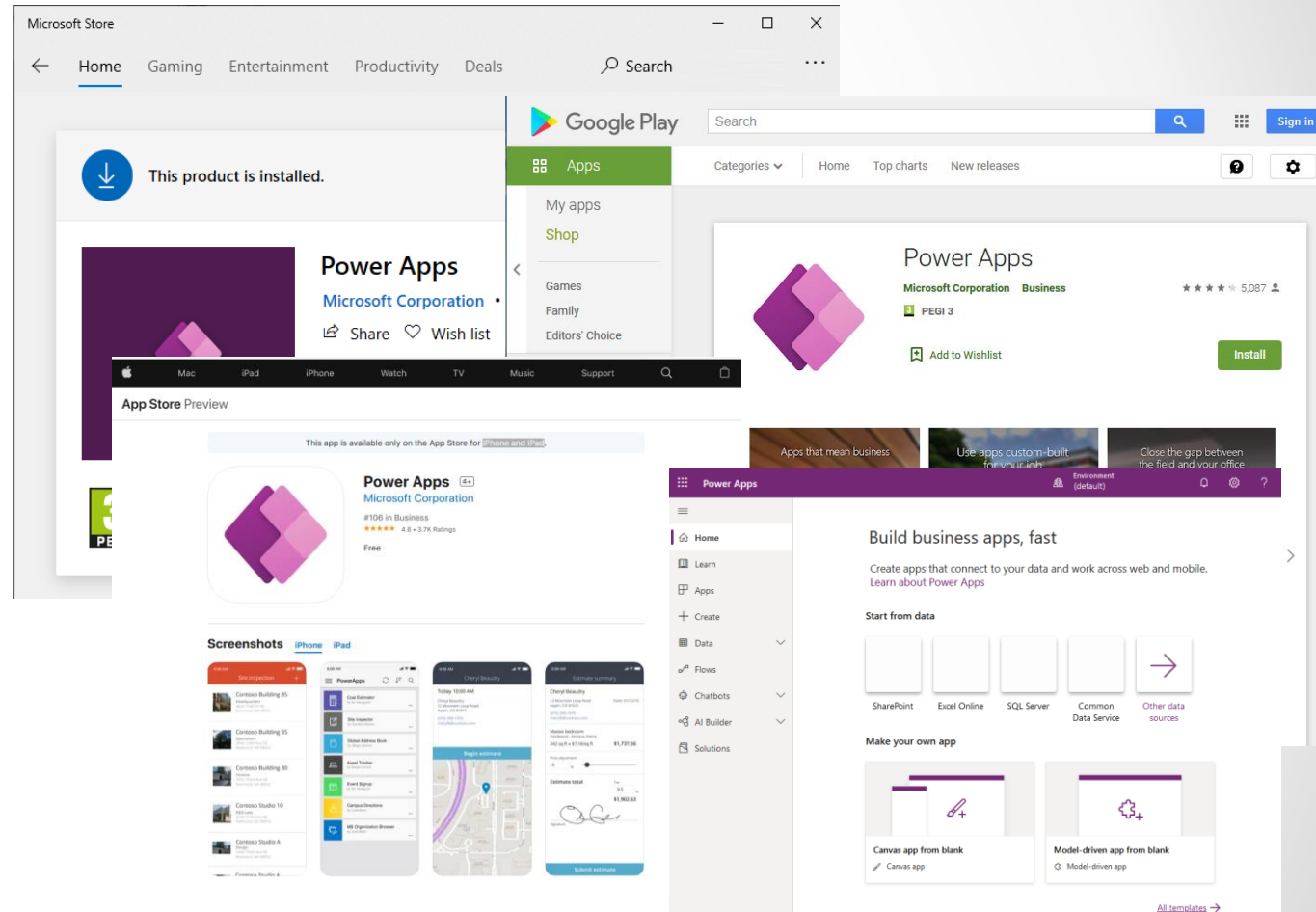
# What is PowerApps

- Application Platform as a Service (aPaaS)
  - PowerApps Desktop Studio was deprecated June 1st 2018
- It's a fast developing environment that lets you build custom applications using services, connectors and data platform
- Uses responsive layouts to run seamlessly in browser or on mobile devices
- The app can be publish for web and mobile
  - Does not use Apple or Google store for publishing
  - The PowerApps mobile app is used to access



# Where it can be used

- Windows OS Desktop
  - Available Microsoft Store
  - <https://aka.ms/powerappswin>
- Google Android
  - Available Google Play Store
  - <https://aka.ms/powerappsandroid>
- Apple iPhone and iPad
  - Available Apple App Store
  - <https://aka.ms/powerappsios>
- Web
  - <https://web.powerapps.com>



# Application Types

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In the demonstration I will talk about the types of applications

I want to show fewer slides possible and have enough time for the demo





# Power Apps Community Plan

- You can start using Power Apps using community plan
- <https://powerapps.microsoft.com/en-us/communityplan/>
- Free environment for individual use
- Is restricted for use by a single user and with **no ability to share apps**
- Not for a team or production use
- Is possible to export the resources from this environment to other environment

Microsoft | Power Apps

## Power Apps Community Plan

Get a free environment for individual use

- Learn and develop your Power Apps and Power Automate skills
- Explore and create in a full-featured environment for development
- Build apps on a single, extensible view of your data with the Common Data Service

[Get started free](#)

Existing user? [Create an individual environment](#)

**Build business apps and workflows**  
Create apps and flows without writing code. Connect to multiple data sources at the same time with the help of more than 100 built-in-connectors.

**Free for individual use**  
Explore and learn everything about Power Apps, Power Automate and the Common Data Service. This environment has limits on users and data storage.

**Build and distribute smarter apps**  
Apps and flows built on CDS can use existing data, including Dynamics 365, Office 365, and Azure Active Directory. List your solutions on AppSource to make them available to millions of users.



# PowerApps Licensing

Plans and capabilities		Community Plan (Free development)	Per app plan	Per user plan
Run custom apps / portal	Run custom apps(both canvas and model driven	Unlimited	2 apps	Unlimited
	Access custom portals		1 custom portal	Unlimited
Connect to your data	Standard connectors	Yes	Yes	Yes
	Premium and custom connector	Yes	Yes	Yes
	On premises data gateway	Yes	Yes	Yes
Store and manage data	Utilize Common Data Service	Yes	Yes	Yes
	Create and access custom entities(includes complex entities)	Yes	Yes	Yes
	Dynamics 365 restricted entities access		Read only	Read Only
Execute flows	Automated, instant, and scheduled flows	Within app context	Within app context	Within app context
	Business process flows	Within app context	Within app context	Within app context
Per license capacity	Common Data Service Database Capacity	200 MB	50 MB	250 MB
	Common Data Service File Capacity	2 GB	400 MB	2 GB
	Daily API request limit		1.000	5.000



# PowerApps features

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- Almost every month there are always new features
  - Consult the PowerApps Blog for preview features
    - <https://powerapps.microsoft.com/en-us/blog/category/new-features/>
- Release plan
  - <https://docs.microsoft.com/en-us/power-platform-release-plan>
- Power Apps version is not available in all regions at once
  - <https://docs.microsoft.com/en-us/power-platform/released-versions/powerapps>



# PRE-DEMO



# Prepare the environment

- Prepare the environment to start using Power Apps with Microsoft 365 Developer Program

The 'New environment' dialog box contains the following fields and options:

- Name \***: Trial30Days
- Type \***: Trial
- Region \***: Europe - Default
- Purpose**: Describe the environment purpose
- Create a database for this environment?**: Yes (checked)

The 'Add database' dialog box contains the following fields and options:

- Language \***: English
- URL \***: trialpowerapps.crm4.dynamics.com
- Currency \***: EUR (€)
- Enable Dynamics 365 apps**: No
- Deploy sample apps and data**: No
- Security group**: Restrict environment access to people in this security group. Otherwise, everyone can access.

This environment can't be created because your org (tenant) needs at least 1 GB of database capacity. Request ID: [redacted]. [Monitor capacity](#) [Learn more](#)

The Capacity management page shows the following information:

- Summary**: Your organization (tenant) is over capacity. This will impact certain environment operations. [Manage capacity.](#)
- Storage capacity usage**: Database storage is over capacity. This will impact certain environment operations. [Learn more.](#)
- Database**: 1024 of 0 MB used (102300% over)
- Log**: 0 of 0 MB used (100% available)
- File**: 0 of 0 MB used (100% available)

<https://make.powerapps.com>

The Settings page includes the following sections:

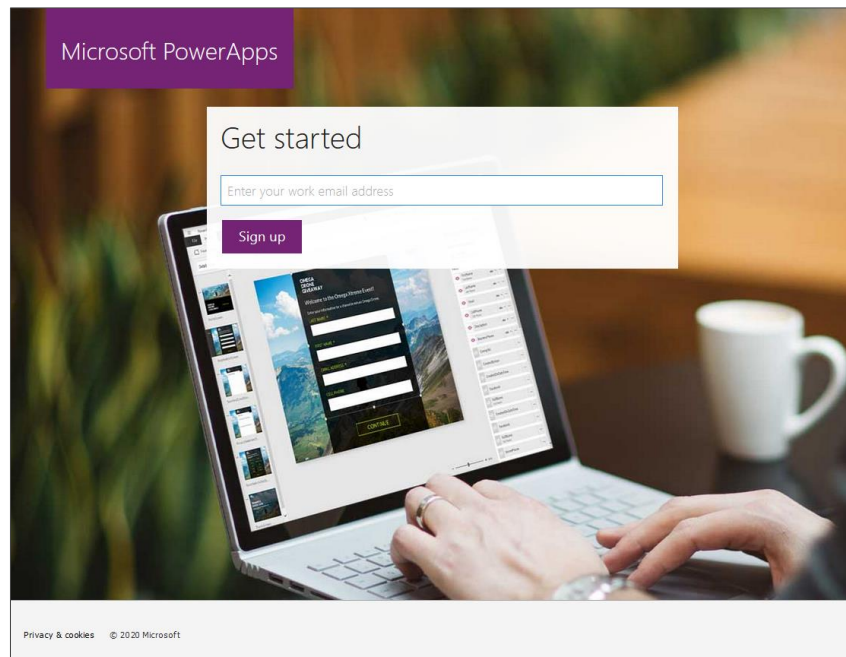
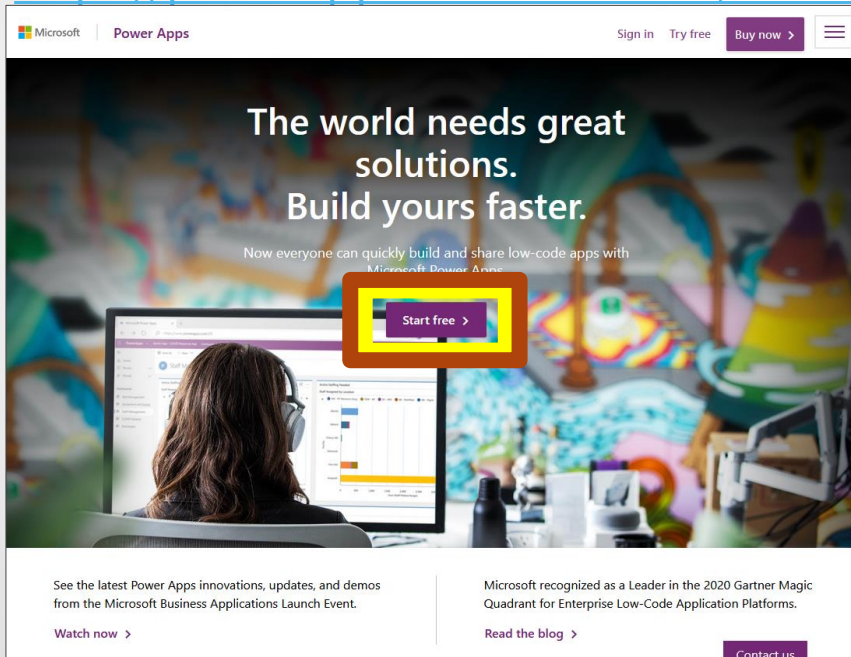
- Power Apps**: Admin center, **Plan(s)**, Advanced settings, Session details, Power Apps settings
- Plan(s)**: Power Apps for Office 365



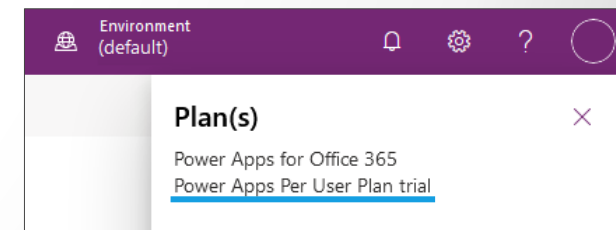
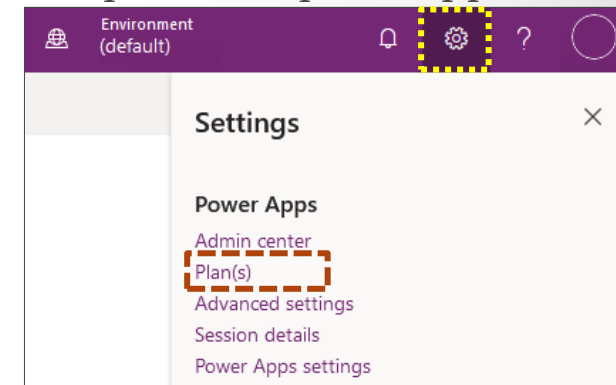
# Prepare the environment (continue)

- Add PowerApps Plan 2 Trial per user
- Can only create one trial environment per tenant

<https://powerapps.microsoft.com/en-us/>



<https://make.powerapps.com>



[Microsoft Power Apps and Power Automate Licensing Guide](#)



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No more slides lest move to action  
Demo time





# Demo 1

### Demo App



## Client Confirmation

**Confirmation**


Name:


E-mail:

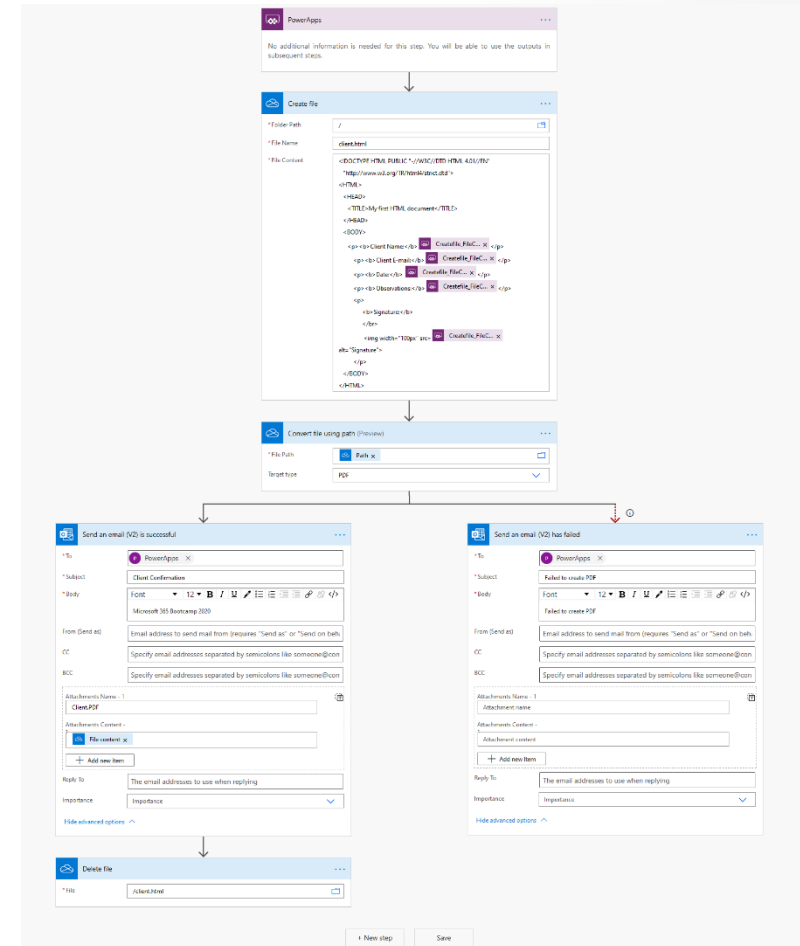
Date: November 4, 2020

Observations:

**Client signature**







# Demo 2

The screenshot shows a mobile application interface with three main sections:

- Left Panel:** A sidebar menu with two items: "Client Confirmation" (with a group of three people icon) and "Speakers" (with a single person icon).
- Speakers List:** A central list of speakers, each with a profile picture, name, and role. The list includes:
  - André Melancia: Developer / DBA / Microsoft
  - Boriana Petrova: ITraining CEO, Excel MVP
  - Dimcho Tsanov: Founder of Singens - Office 365 add-
  - Ekaterina Marinova: MVP AI
  - Ivan Donev: Microsoft Data platform MVP and
  - Ricardo Cabral: MCT (Microsoft Certified Trainer) |
- Speaker Detail Panel:** A right-hand panel showing details for Ricardo Cabral:
  - Speaker:** Ricardo Cabral
  - Headline:** MCT (Microsoft Certified Trainer) | IT Trainer | IT Consultant
  - About:** Ricardo Cabral is a Technical Engineer in Computer Science, Microsoft Certified Trainer (MCT), IT Trainer and also IT Consultant. Ricardo is interested in technology with several years of experience in IT management, development and projects. He participates, volunteers and speaks in community meetings. In his free time he often spotted at Xbox Live.
  - Session:** Building PowerApp from Scratch
  - Back Button:** A blue button labeled "Back" at the bottom right.



# Q&A



# Q&A

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Source: [keepcalmandposters.com](http://keepcalmandposters.com)



# Summary

---

- How to signup to Microsoft 365 Developer Program
- What is Microsoft Power Platform
- Create an app using Microsoft PowerApps



Thank You!

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# Building PowerApp from Scratch

## Microsoft 365 Developer BootCamp Bulgaria 2020

Thank You!

**Ricardo Cabral**

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<https://LinkedIn.COM/in/rramoscabral>

<https://Twitter.COM/rramoscabral>



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