TARGET AUDIENCE

This project is to brings the power of the C# language to the community of Azure notebook users.

Whether the user is a developer or a beginner coupled with our introductory C# course notebooks, the need of every user is met.

COMMERCIAL ASPECT

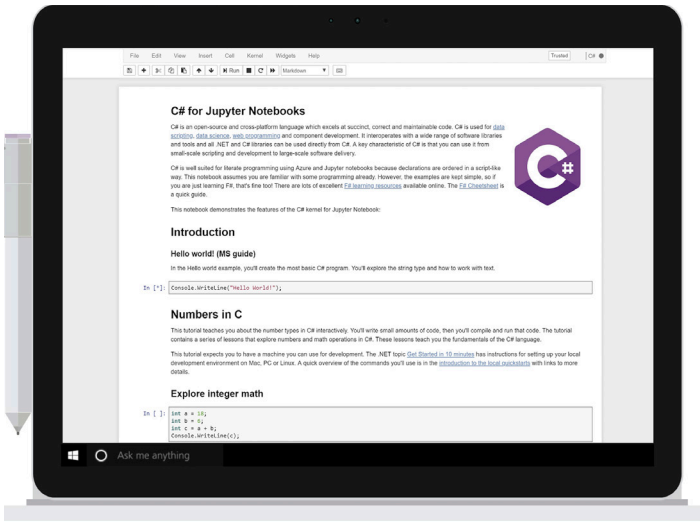
There is a whole new set of users who are learning how to program using Azure Notebooks.

The Microsoft C# Kernel ensures that C# is not left out of the running in industry.

Creating an environment to learn and develope code in C#

Microsoft

MIRCOSOFT C# KERNEL



CONCEPT

C# is one of the most widely used programming languages in the world. We create a C# Kernel to cater to user who want to program C# using Azure notebooks.

Along with the C# Kernel we designed and created complimentary notebooks to attract and drive users to our C# Kernel to learn C# using Azure Notebooks.

The C# Notebooks are designed such that users of any experience level can develop in C# and learn the programming language simultaneously.

C# Notebooks are created to ignite creative learning practises in C# with capabilities such as:

Microsoft Azure Notebooks

TECHNICAL ASPECT

C# KERNEL

We designed and implemeted an Open Source C# Jupyter kernel using the Roslyn compiler platform. Our C# Kernel implemenation adds to the existing base with features that create a rich user interface such as

- Syntax coloring
- IntelliSense support
- Error Display on Notebook

INTERACTIVE PROTOCOL

Once the features aimed at enhancing the user experience are implemented in the C# Kernel we integrated the C# Kernel with the Azure Notebook service to provide a seamless on-ramp for anyone who wants to learn C# using the service.

C# NOTEBOOKS

We created a compelling set of C# Azure notebooks that could form the basis of an introduction to C# online class that is deisned to ignite creative learning practises in C#

The set of C# Azure notebooks range from beginner to advanced level that show how to use Azure services in solving a real-world problem

SOLUTION

We create a rich user experience with features included in our C# Kernel design to create a rich user experience whilst coding in C#

Intellisense

This is a context-aware code completion feature that speeds up the process of coding applications by reducing typos and other common mistakes. We implement this with auto completion popups when typing, querying parameters of functions, query hints related to syntax errors and more.

Syntax Highlighting

This feature facilitates writing in C# as keywords, syntax errors and other structures are are visually distinct to the user. Syntax highlighting improves the readability and context of the text making it user friendly whist coding.

Error Display

This feature displays errors made by the user on the notebook whilst adding creative red squiggly highlighting under varibles that are wrong. This features helps the user identify and learn from syntax mistakes.