

V O L V O

Volvo Wednesday

12 Marzec 2025, Wrocław

Sztuka dzielenia się

IBM i od kuchni. Przepisy w open-sosie

MARCIN OGOŃ





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Doświadczenie

**Owner**

Alpinsoft · Samozatrudnienie
maj 2015 – obecnie · 9 lat 11 mies.
Poland

Software Development / IT Consulting

Projects for automotive:

- Service contracts
- Excel files importing and parsing tool
- IBMi REST integration with JWT
- Angular Front-End application
- Azure and OpenShift
- SQLRPGLE, Java, Apache Camel, Spring Boot, JavaScript, TypeScript, Angular

Projects for banking:

- Pricing and billing application
- Card services
- IBMi administration tools

**Contractor**

Fiserv
cze 2015 – maj 2021 · 6 lat
Warsaw, Masovian District, Poland

ICBS 24/7 - online transaction processing
JSON extract for debt collection...

**ING Bank Śląski**

7 lat 2 mies.
Katowice, Silesian District, Poland

- **IT Development Specialist**
maj 2012 – lut 2015 · 2 lata 10 mies.

ICBS (International Comprehensive Banking System) modifications - RPG and CL.
Customer Screening - Java, VBS...

- **IT Developer**
maj 2008 – maj 2012 · 4 lata 1 mies.

ICBS (International Comprehensive Banking System) modifications - RPG and CL.
Customer Screening - Java, VBS...

- **Programmer**
sty 2008 – maj 2008 · 5 mies.

ICBS (International Comprehensive Banking System) modifications - RPG and CL.

IBM i od kuchni

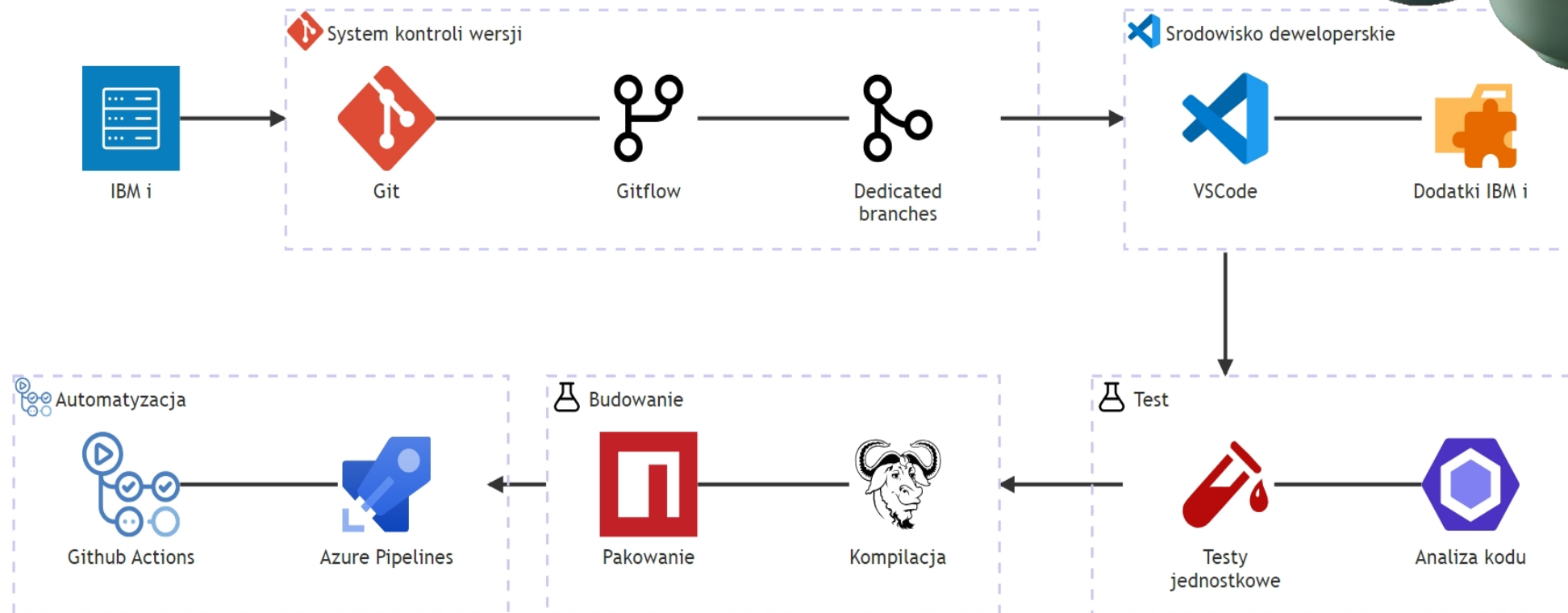
Przygotowanie

- Serwer
 - IBM i
- Środowisko programistyczne
 - VSCoDe
- Narzędzia
 - GIT, git-flow, Putty, WinSCP
- Języki programowania, obiekty systemowe i frameworki
 - RPGLE, Java ..
 - IElastic, Spring Boot, Apache Camel ..
- Automatyzacja
 - GitHub Actions
 - Azure DevOps



Tour de open sos

IBM i



IBM i - Serwer

Dobre rozwiązanie w najlepszej cenie

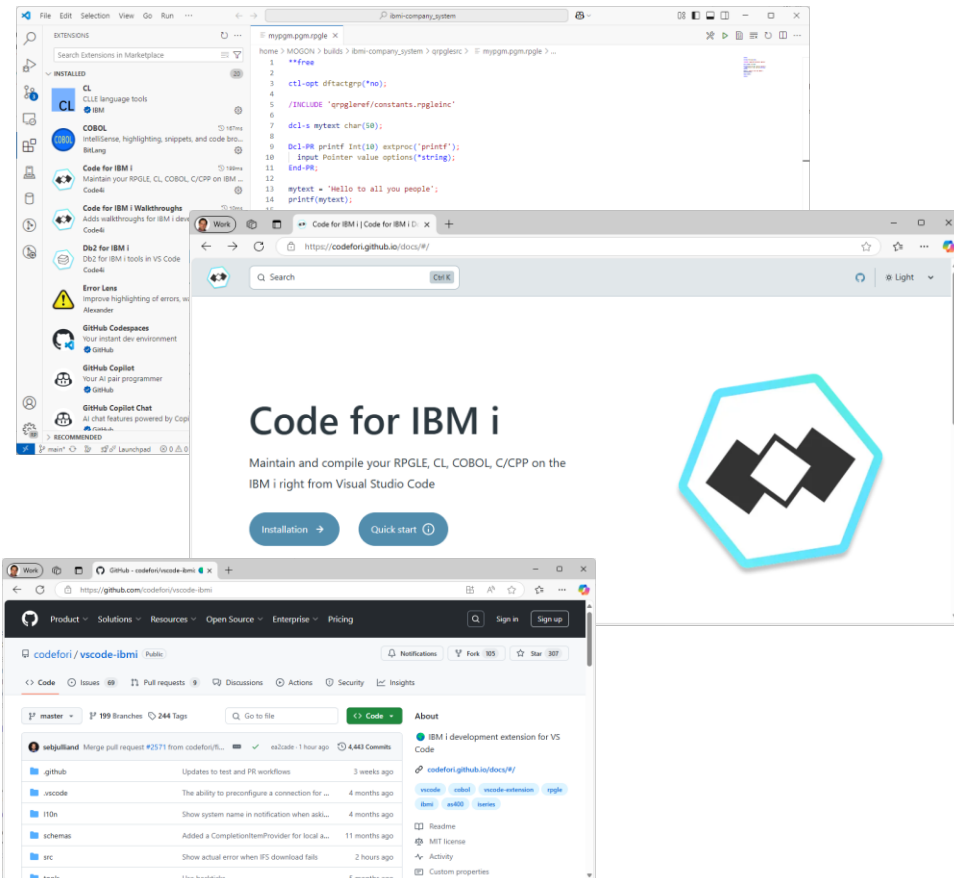


Welcome to PUB400

- A free and public Server running **IBM i 7.5** for everyone
- You can create your own user profile, you have 500MB of disk storage and two private libraries
- You can program in CL, RPG, SQL, COBOL, train your skills and start learning about the best server operating system ever :)
- Create your own programming projects, you can even use node.js or other web technologies (contact us for http settings)
- An average of 25 new users per day! Great IBM i community!

Visual Studio Code i dodatki dla IBM i

IBM i - Środowisko programistyczne



IBM i Development Pack

Code4i | 19,527 | (3)

Base extensions used for IBM i development in VS Code.

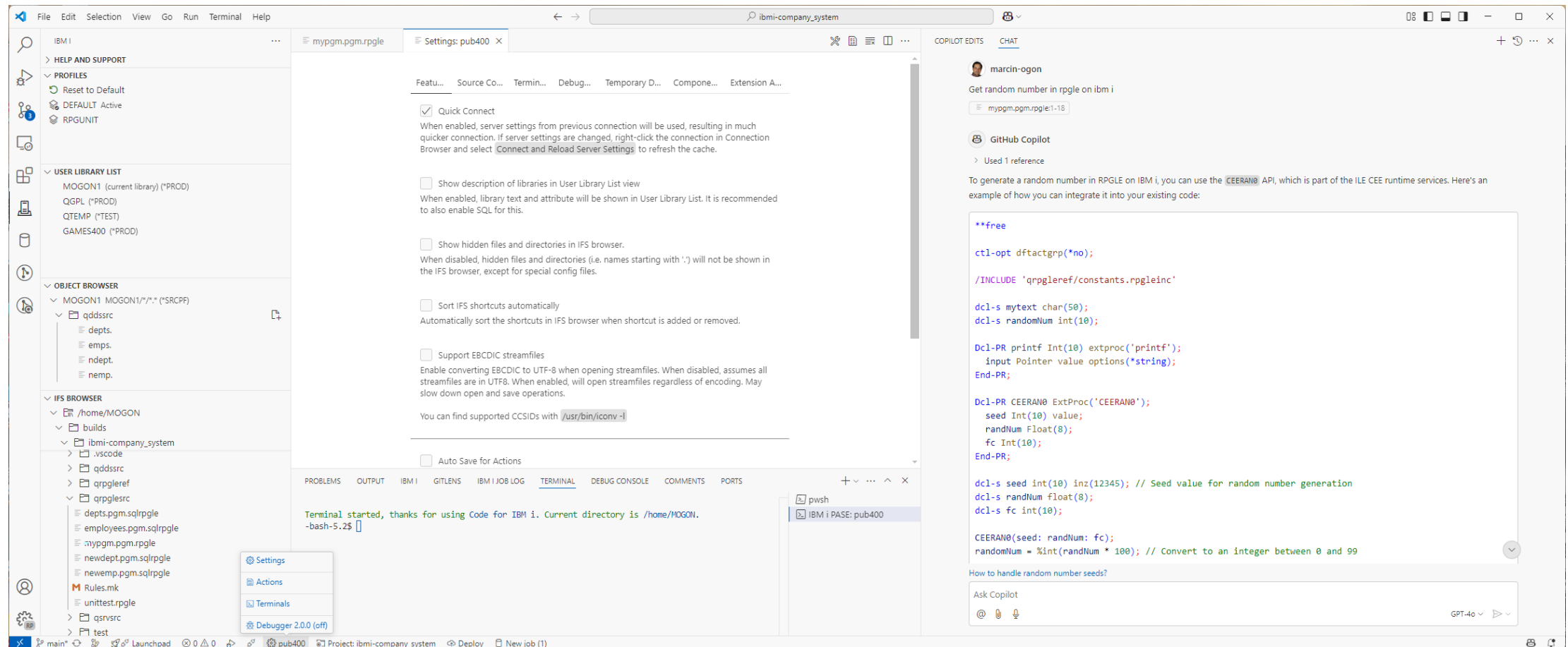
IBM i

Disable Uninstall Auto Update

RPGLE Free Visual Studio Code extension to convert fixe... Brian J Garland	IBMi Languages Syntax highlighting for IBM i languages such... barrettotte
Code for IBM i Maintain your RPGLE, CL, COBOL, C/CPP on I... Code4i	Code for IBM i Walkthroughs Adds walkthroughs for IBM i development in... Code4i
RPGLE RPGLE language tools and linter for VS Code Code4i	Error Lens Improve highlighting of errors, warnings and... Alexander
TODO Highlight highlight TODOs, FIXMES, and any keywords,... Wayou Liu	COBOL IntelliSense, highlighting, snippets, and code... BitLang
Db2 for IBM i Db2 for IBM i tools in VS Code Code4i	IBM i Renderer Preview IBM i display & printer files Code4i
CL CLLE language tools IBM	IBM i Debug Provides a Debug Adapter Protocol (DAP) cli... IBM
IBM i Project Explorer Develop IBM i applications using buildable I... IBM	Source Orbit Object dependency management tool for IB... IBM

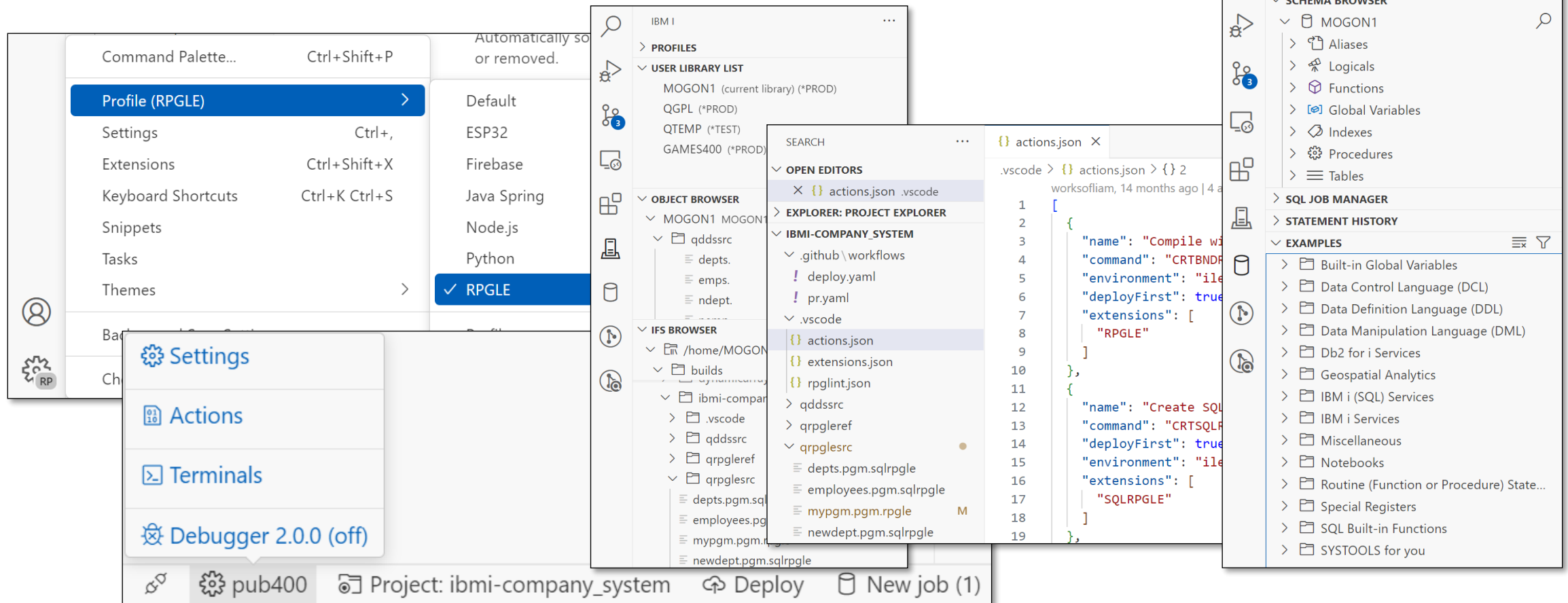
Visual Studio Code – gdzie patrzeć

IBM i - Środowisko programistyczne



Visual Studio Code i dodatki dla IBM i

IBM i - Środowisko programistyczne



Niezbędne, oraz takie, które mogą się przydać.

Narzędzia



Wiele języków, różne zastosowania.

Języki programowania, obiekty systemowe i frameworki

Języki programowania:

- CLLE, RPGLE, SQL
- JAVA
- PHP, Node.js, Python

Zastosowania:

- Procesowanie danych
- Interfejsy
- Wielowątkowość



RPGLE + SQL = SQLRPGLE



Obiekty systemowe i frameworki

Języki programowania, obiekty systemowe i frameworki

Obiekty systemowe:

- **Data Queue**
Communicate and store data within a job or between jobs.
- **Data Area**
Object used to store the shared data of different jobs
- **User Space**
Collection of bytes that can be used for storing any user-defined information

Frameworki:

- **ILElastic**
Self contained web application server for the ILE environment on IBM i to run microservices.
- **Spring Boot**
Helps you to create Spring-powered, production-grade applications and services with absolute minimum fuss.
- **Apache Camel**
Integration framework that empowers you to quickly and easily integrate various systems



Przydasie

Automatyzacja

IRPGUnit – testy jednostkowe

- CRTRPGMOD
- CRTSRVPGM
- RUCALLTST z parametrem XMLSTMF('./test/TEST-report.xml')

VSCODE-RPGLE – analizator kodu

- Konfiguracja: .vscode/rpglint.json
- Uruchamianie: npx @halcyontech/rpglint

Source Orbit – Zarządzanie zależnościami w projekcie

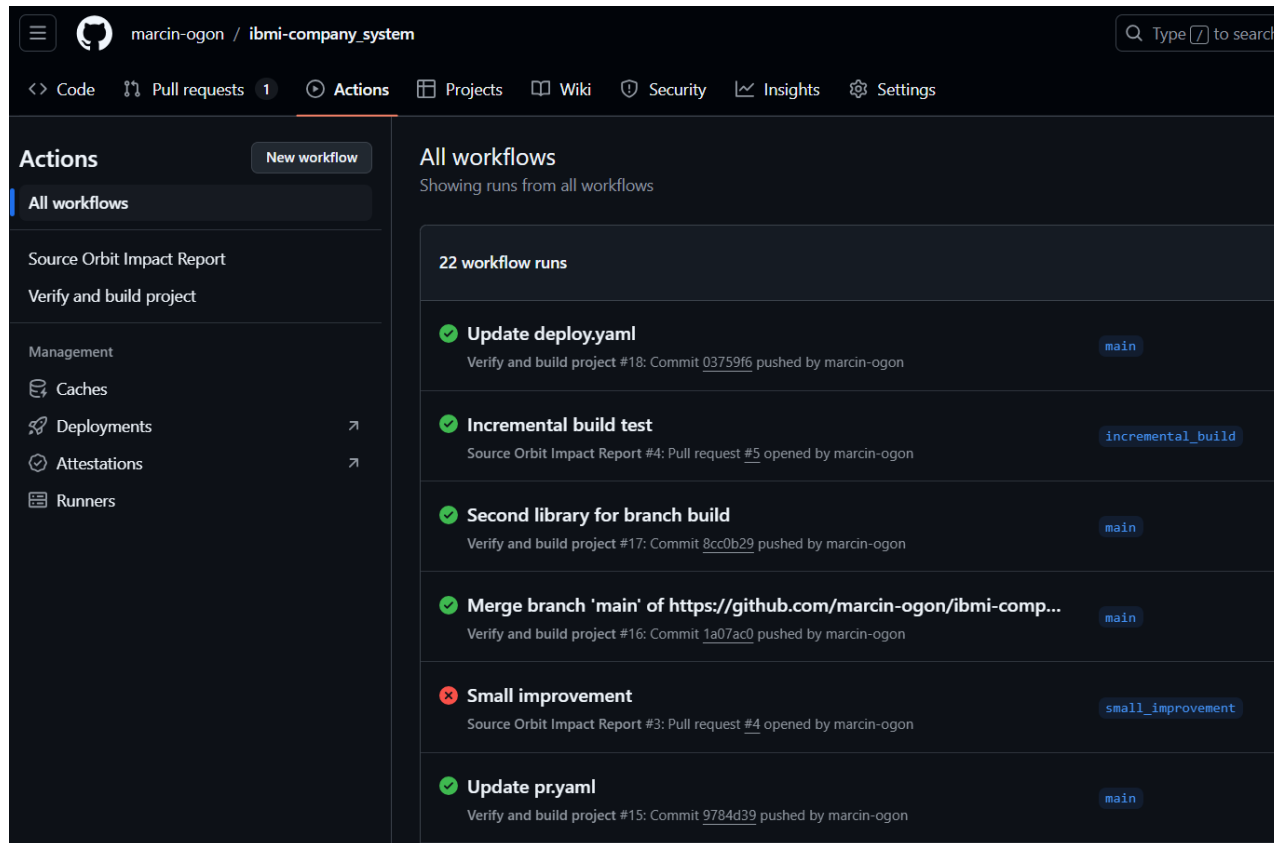
GNU Make - Kompilacja

- Budowanie projektu: /QOpenSys/pkgs/bin/gmake
- Kompilowanie źródeł: /QOpenSys/pkgs/bin/gmake {pliki}



GitHub Actions i Azure DevOps

Automatyzacja



name: Verify and build project

on:

push:

branches:

- main

jobs:

ibmi-build:

environment: COMMON1

runs-on: ubuntu-latest

permissions:

packages: read

contents: read

steps:

- uses: actions/checkout@v4

with:

fetch-depth: 0

- uses: actions/setup-node@v4

with:

node-version: 20

- run: npm i -g @ibm/sourceorbit @ibm/ibmi-ci @halcyontech/rpglint

- name: Generate lint information

continue-on-error: true

run: rpglint >> \$GITHUB_STEP_SUMMARY

- name: Generate makefile

run: so -bf make

Odnośniki

- [What's New in 7.5? - IBM Documentation](#)
- [Visual Studio Code - Code Editing. Redefined](#)
- [Code for IBM i | Code for IBM i Docs](#)
- [Download PuTTY - a free SSH and telnet client for Windows](#)
- [The Collaborative API Development Platform - Insomnia](#)
- [GitHub - tn5250j/tn5250j: A 5250 terminal emulator for the AS/400 written in Java](#)
- [IBM/vscode-ibmi-projectexplorer: 📁 IBM i Project Explorer for VS Code](#)
- [Linter | Code for IBM i Docs](#)
- [tools-400/irpgunit: iRPGUnit Testing for RPG Developers](#)
- [Code for IBM i | Code for IBM i Docs](#)
- [IBM/sourceorbit: 🔧 Dependency Management for IBM i projects](#)
- [IBM/ibmi-ci: A CLI \(Command Line Interface\) to work with IBM i](#)
- [codefori/vscode-rpgle: RPGLE language tools for VS Code](#)
- [codefori/vscode-ibmi: 🌐 IBM i development extension for VS Code](#)
- [marcin-ogon/ibmi-company_system: IBM i Example Application](#)

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