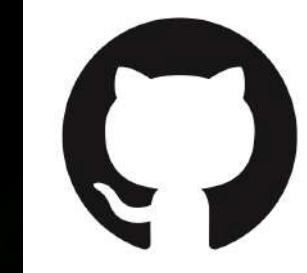


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ເອກສາຮອບນັບເຖິງເກົ່າທີ່ໂດຍບໍ່ຮັບ ນອບນຸຕູເວີໄວ້ ລັກດີ ດຳເນັດກ່າວກຳການຄຸດລອກ ແກ້ໄນ ເພຍແພວ໌ ຮູ້ອ່າວ ຈົດຈ້າກມາຍ່າ ສ່ວນທີ່ເປັນໃດຂອງເນື້ອຫາ ຮູ້ອ່າວ ຖັນຍາດໃຫຍ່ໄປໄດ້ຮັບອຸທຸນາດ

Git & Version Control



DAY 8 - ROAD TO FRONT-END DEVELOPER BOOTCAMP

គុណពេល Dev តាមទីក្រុង ?

เมื่อคุณซื้อคอมมาใหม่



ตั้งค่า
ลอง TEST
IDE
ใหม่ที่เพิงติดตั้ง

เปลี่ยนธีม ให้เป็นสีดำ

มีเรื่องที่นำเสนอใจเย็นๆ มากเลย



ดวงชวยชะมัดด



BURNTO
DEV

ผมกี่หาวีรีแก้ Bug มาทั้งวัน



แล้วมาสรุปกี่ว่าเลือก Run "ผิดไฟล์"

ทั้งวันคิดไม่ออก



บุนไปแบบเดียว ลิงก์เชิญมามีตติ้งมาอีกแล้วจ้า



พูดความจริง ทำไมไม่มีใครเชื่อ

ผู้ชาย :
**"ตัวแปร ซื้อฟังก์ชัน
พวknี้ตั้งเม้ม ๆ
ไปก่อน เดียวค่อย
กลับมาแก้น่า"**

สีหน้า
เพื่อนผู้
ที่ไม่เชื่อว่าผู้
จะกลับมาแก้



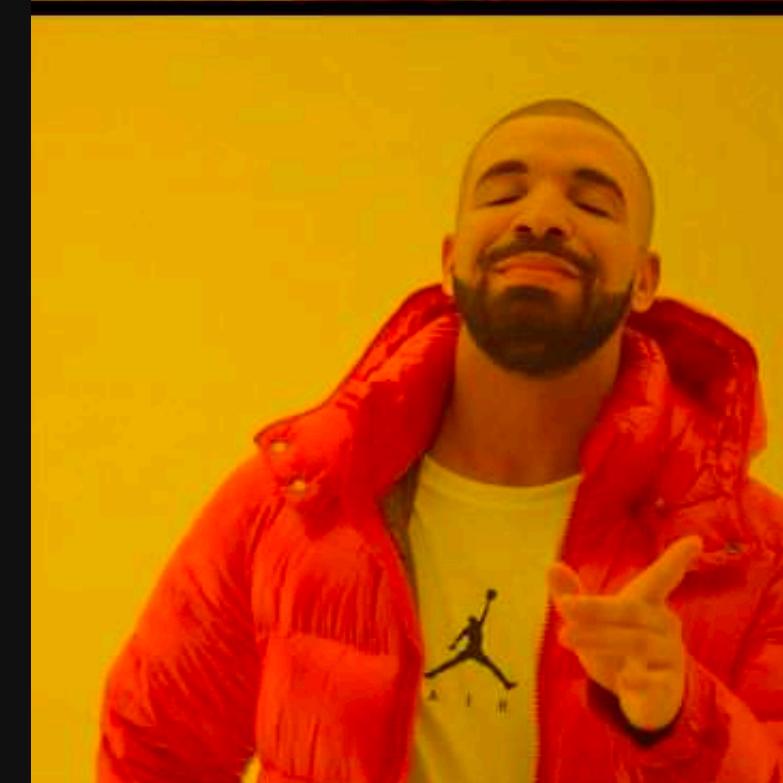
เสียเงิน酵ะไปทำไม ..

เคล็ดลับสู่ความสำเร็จ “แบบตันทุนตា”

BURNTO
DEV



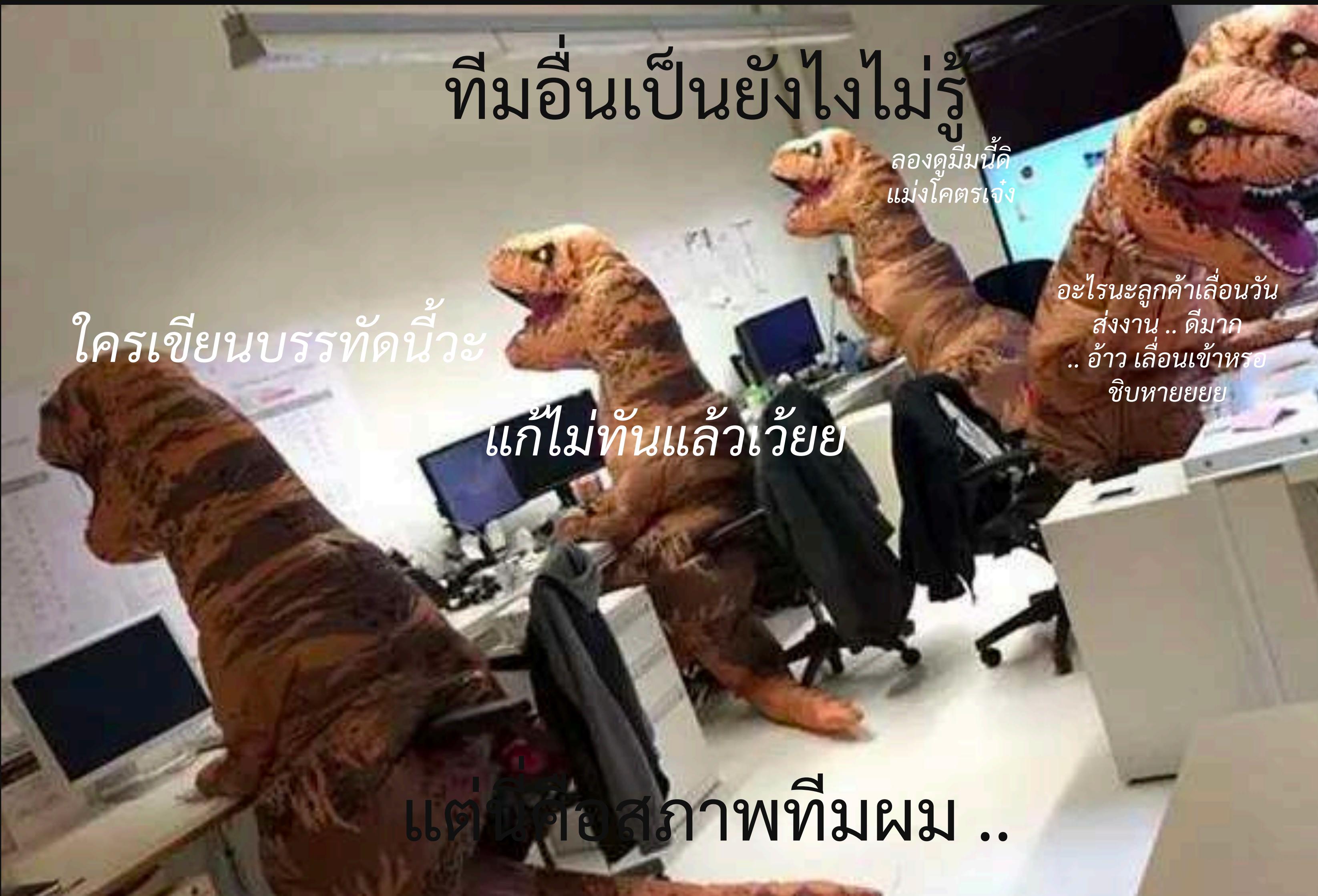
เสียเงิน
เป็นหมื่นเป็นแสน
เพื่อจ้าง Tester



ไม่ต้อง Test
แล้วเอาขึ้น Production
จะมีคนเป็นหมื่นเป็นแสน คน
Test ให้เราแบบฟรี ๆ

เสียเงินเยอะไปทำไม ..





เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

🔥 เวลาจะเพิ่มไฟเจอร์ หรือ โค้ดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

- 🔥 เวลาจะเพิ่มไฟเจอร์ หรือ โค้ดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม
- 🔥 พ้อเอามารวมเสร็จแล้วก็ไม่รู้ว่าต้องรวมตรงไหน

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

- 🔥 เวลาจะเพิ่มไฟเจอร์ หรือ โค้ดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม
- 🔥 พ้อเอามารวมเสร็จแล้วก็ไม่รู้ว่าต้องรวมตรงไหน
- 🔥 ซึ่งพอรู้ว่ารวมตรงไหนเสร็จแล้วโค้ดเรา ก็จะระเบิด

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

- 🔥 เวลาจะเพิ่มไฟเจอร์ หรือ โค้ดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม
- 🔥 พ้อเอามารวมเสร็จแล้วก็ไม่รู้ว่าต้องรวมตรงไหน
- 🔥 ซึ่งพอรู้ว่ารวมตรงไหนเสร็จแล้วโค้ดเรา ก็จะเบิด
- 🔥 พอกดเรา จะเบิดเสร็จแล้วเรา ก็ไม่โน

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

- 🔥 เวลาจะเพิ่มไฟเจอร์ หรือ โค้ดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม
- 🔥 พ้อเอามารวมเสร็จแล้วก็ไม่รู้ว่าต้องรวมตรงไหน
- 🔥 ซึ่งพอรู้ว่ารวมตรงไหนเสร็จแล้วโค้ดเรา ก็จะเบิด
- 🔥 พ้อโค้ดเรา จะเบิดเสร็จแล้วเรา ก็ไม่โน
- 🔥 พ้อมโน เสร็จแล้วเรา ก็เริ่มหัว

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

- 🔥 เวลาจะเพิ่มไฟเจอร์ หรือ โค้ดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม
- 🔥 พ้อเอามารวมเสร็จแล้วก็ไม่รู้ว่าต้องรวมตรงไหน
- 🔥 ซึ่งพอรู้ว่ารวมตรงไหนเสร็จแล้วโค้ดเรา ก็จะเบิด
- 🔥 พ้อโค้ดเรา จะเบิดเสร็จแล้วเรา ก็ไม่โน
- 🔥 พ้อมโน เสร็จแล้วเรา ก็เริ่มหัว
- 🔥 พ้อเริ่มหัวเสร็จแล้วเรา ก็ไปหาอะไรกัน

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

- 🔥 เวลาจะเพิ่มไฟเซอร์ หรือ โค้ดในกีเม็กต์ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม
- 🔥 พ้อเอาจารวมเสริจแล้วก็ไม่รู้ว่าต้องรวมตรงไหน
- 🔥 ซึ่งพอรู้ว่ารวมตรงไหนเสริจแล้วโค้ดเรา ก็จะเบิด
- 🔥 พ่อโค้ดเรา จะเบิดเสริจแล้วเรา ก็จะโม่
- 🔥 พ่อโม่จะเสริจแล้วเรา ก็เริ่มหัว
- 🔥 พ่อเริ่มหัวจะเสริจแล้วเรา ก็ไปหาอะไรกัน
- 🔥 ด้วยความหัวبغกับความโม่เราเลยคีย์วะไรไม่ได้

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

- 🔥 เวลาจะเพิ่มฟีเจอร์ หรือ โค้ดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม
- 🔥 พ้อเอามารวมเสร็จแล้วก็ไม่รู้ว่าต้องรวมตรงไหน
- 🔥 ซึ่งพอรู้ว่ารวมตรงไหนเสร็จแล้วโค้ดเรา ก็จะเบิด
- 🔥 พ้อโค้ดเรา จะเบิดเสร็จแล้วเรา ก็ไม่โน๊อก
- 🔥 พ้อมะ เสร็จแล้วเรา ก็เริ่มหัว
- 🔥 พ้อเริ่มหัวเสร็จแล้วเรา ก็ไปหาอะไร กัน
- 🔥 ด้วยความหัวบวก กับความโน๊อก เราเลยเคี้ยวอะไร ไม่ได้
- 🔥 พ้อเคี้ยวไม่ได้อาหาร ก็ติดคอ

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

- 🔥 เวลาจะเพิ่มไฟเจอร์ หรือ โค้ดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม
- 🔥 พอเอามาร่วมเสริจแล้วก็ไม่รู้ว่าต้องรวมตรงไหน
- 🔥 ซึ่งพอรู้ว่ารวมตรงไหนเสริจแล้วโค้ดแรกก็ระเบิด
- 🔥 พอโค้ดแรกระเบิดเสริจแล้วเรา ก็โมฆะ
- 🔥 พอโมฆะเสริจแล้วเรา ก็เริ่มหัว
- 🔥 พอเริ่มหัวเสริจแล้วเรา ก็ไปหาอะไรกัน
- 🔥 ด้วยความหัวบวกกับความโมฆะเราเลยเคี้ยวอะไรไม่ดี
- 🔥 พอเคี้ยวไม่ดีอาหารก็ติดคอ
- 🔥 พออาหารติดคอ เราเลยหาเพื่อนช่วย

ເກີດປັນຫວະໄຣຂຶ້ນໄດ້ບ້າງບະ ?

- 🔥 ເວລາຈະເພີ່ມຟື່ຈອຣ ຮີ້ວ ຂຼັດໃນກົມກົດຕ້ອງວັພໂຮດ ສົ່ງໄຟລ໌ກັນເວັງແລ້ວຄ່ອຍມາຮວມ
- 🔥 ພວເອມາຮວມເສົ່ງແລ້ວກົດໄມ່ຮູ້ວ່າຕ້ອງຮວມຕຽນໄຟນ
- 🔥 ທີ່ພວຮູ້ວ່າຮວມຕຽນໄຟນເສົ່ງແລ້ວຂຼັດເຮົາກົດຮະເບີດ
- 🔥 ພວຂຼັດເຮົາຮະເບີດເສົ່ງແລ້ວເຮົາກົດໂມໂກ
- 🔥 ພວໂມໂກເສົ່ງແລ້ວເຮົາກົດເຮົ່ມເຖິງ
- 🔥 ພວເຮົ່ມເຖິງເສົ່ງແລ້ວເຮົາກົດໄປຫວະໄຣກີນ
- 🔥 ດ້ວຍຄວາມເຫັນບວກກັບຄວາມໂມໂກຮາເລຍເຄີຍວະໄຣໄມ່ດີ
- 🔥 ພວເຄີຍໄມ່ດີເວົາຫາກົດຕິດຄວ
- 🔥 ພວເວົາຫາຕິດຄວ ເຮົາເລຍຫາເພື່ອນໜ່ວຍ
- 🔥 ດ້ວຍຄວາມທີ່ຂຼັດເຮົາໄນ່ມີຄຸນກາພເຮົາເລຍໄນ່ມີເພື່ອນຄບ

ເກີດປັນຫວາງໄສ້ບັນໄດ້ບ້າງບະ ?

🔥 ເວລາຈະເພີ່ມຟືເຈອຣ ຮູ່ອ ຂັດໃນກົມກົດຕ້ອງອັພໂໂລດ ສ່ົງໄຟລົກັນເອງແລ້ວຄ່ອຍມາຮວມ

🔥 ພອເອາມາຮວມເສົ່ງຈະແລ້ວກີ່ໄມ່ຮູ້ວ່າຕ້ອງຮວມຕຽນໄຟນ

🔥 ຜຶ່ງພວຮູ້ວ່າຮວມຕຽນໄຟນເສົ່ງຈະແລ້ວໂຄດເຮັກຮະເບີດ

🔥 ພວໂຄດເຮັກຮະເບີດເສົ່ງຈະແລ້ວເຮັກໂນໂໂກ

🔥 ພວໂນໂເສົ່ງຈະແລ້ວເຮັກໂຮ່ມໂຮ່ງ

🔥 ພວເຮັມໂຮ່ງເສົ່ງຈະແລ້ວເຮັກໂປ້ຫວາງໄສ້ກີບ

🔥 ດ້ວຍຄວາມເໝວບກັບຄວາມໂນໂໂຮເລຍເຄີ່ຍວະໄໄມ່ດີ

🔥 ພວເຄີ່ຍໄມ່ດີເຂົາຫາຮັກຕິດຄວ

🔥 ພວເຂົາຫາຕິດຄວ ເຮັຍຫາເພື່ອນໜ່ວຍ

🔥 ດ້ວຍຄວາມກໍ່ໂຄດເຮາໄມ່ມີຄຸນກາພເຮັຍໄມ່ມີເພື່ອນຄບ

🔥 ສຸດທ້າຍເຮັກຕາຍ

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

🔥 เวลาจะเพิ่มฟีเจอร์ หรือ โคดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม

🔥 พ้อเอาจริงๆ เสร์จแล้วก็ไม่รู้ว่าต้องรวมตรงไหน

🔥 ซึ่งพอรู้ว่ารวมตรงไหนเสร์จแล้วโค้ดเรา ก็จะเบิด

🔥 พ้อโค้ดเรา จะเบิดเสร์จแล้วเรา ก็ไม่โน๊อก

🔥 พ้อโน๊อกเสร์จแล้วเรา ก็เริ่มหัว

🔥 พ้อเริ่มหัวเสร์จแล้วเรา ก็ไปหาอะไรกัน

🔥 ด้วยความหัวบากกับความโน๊อก เราเลยเคี้ยวอะไรไม่ได้

🔥 พ้อเคี้ยวไม่ดีอาหาร ก็ติดคอ

🔥 พ้ออาหารติดคอ เราเลยหาเพื่อนช่วย

🔥 ด้วยความที่โค้ดเรา ไม่มีคุณภาพ เราเลยไม่มีเพื่อนครบ

🔥 สุดท้ายเรา ก็ตาย

ทุกข์ สมุทัย นิโรธ มรรค

ทุกข์ : กลัวตาย เพราะอาหารติดคอจากเรื่องเล่าวันนี้

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

- 🔥 เวลาจะเพิ่มฟีเจอร์ หรือ โคดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม
- 🔥 พ้อเอาจารวมเสริจแล้วก็ไม่รู้ว่าต้องรวมตรงไหน
- 🔥 ซึ่งพอรู้ว่ารวมตรงไหนเสริจแล้วโค้ดเรา ก็จะเบิด
- 🔥 พ้อโค้ดเรา จะเบิดเสริจแล้วเรา ก็ไม่โน๊อก
- 🔥 พ้อโน๊อกเสริจแล้วเรา ก็เริ่มหัว
- 🔥 พ้อเริ่มหัวเสริจแล้วเรา ก็ไปหาอะไรกัน
- 🔥 ด้วยความหัวบากกับความโน๊อก เราเลยเคี้ยวอะไรไม่ดี
- 🔥 พ้อเคี้ยวไม่ดีอาหาร ก็ติดคอ
- 🔥 พ้ออาหารติดคอ เราเลยหาเพื่อนช่วย
- 🔥 ด้วยความที่โค้ดเรา ไม่มีคุณภาพ เราเลยไม่มีเพื่อนครบ
- 🔥 สุดท้ายเรา ก็ตาย

ทุกข์ สมุทัย นิโรม มรรค

ทุกข์ : กลัวตาย เพราะอาหารติดคอ จากเรื่องเล่าวันนี้
สมุทัย : เพราะทีม และ ตัวเรา โค้ดมัน มีปัญหา

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

- 🔥 เวลาจะเพิ่มฟีเจอร์ หรือ โคดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม
- 🔥 พ้อเอาจารวมเสร็จแล้วก็ไม่รู้ว่าต้องรวมตรงไหน
- 🔥 ซึ่งพอรู้ว่ารวมตรงไหนเสร็จแล้วโค้ดเรา ก็จะเบัด
- 🔥 พ้อโค้ดเรา จะเบิดเสร็จแล้วเรา ก็ไม่โน๊อก
- 🔥 พ้อโน๊อกเสร็จแล้วเรา ก็เริ่มหัว
- 🔥 พ้อเริ่มหัวเสร็จแล้วเรา ก็ไปหาอะไร กิน
- 🔥 ด้วยความหัวบากกับความโน๊อก เราเลยเคี้ยวอะไรไม่ได้
- 🔥 พ้อเคี้ยวไม่ได้อาหาร ก็ติดคอ
- 🔥 พ้ออาหารติดคอ เราเลยหาเพื่อนช่วย
- 🔥 ด้วยความที่โค้ดเรา ไม่มีคุณภาพ เราเลยไม่มีเพื่อนคบ
- 🔥 สุดท้ายเรา ก็ตาย

ทุกข์ สมุทัย นิโรม مرض

ทุกข์ : กลัวตาย เพราะอาหารติดคอจากเรื่องเล่าวันนี้
สมุทัย : เพราะทีม และ ตัวเรา โค้ดมันมีปัญหา
นิโรม : เครียดหุ่ดหงิด และ โมโห

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

- 🔥 เวลาจะเพิ่มฟีเจอร์ หรือ โคดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม
- 🔥 พ้อเอาจารวมเสร็จแล้วก็ไม่รู้ว่าต้องรวมตรงไหน
- 🔥 ซึ่งพอรู้ว่ารวมตรงไหนเสร็จแล้วโค้ดเรา ก็จะเบิด
- 🔥 พ้อโค้ดเรา จะเบิดเสร็จแล้วเรา ก็ไม่โน๊อก
- 🔥 พ้อโน๊อกเสร็จแล้วเรา ก็เริ่มหัว
- 🔥 พ้อเริ่มหัวเสร็จแล้วเรา ก็ไปหาอะไรกัน
- 🔥 ด้วยความหัวبغกับความโน๊อก เราเลยเคี้ยวอะไรไม่ดี
- 🔥 พ้อเคี้ยวไม่ดีอาหาร ก็ติดคอ
- 🔥 พ้ออาหารติดคอ เราเลยหาเพื่อนช่วย
- 🔥 ด้วยความที่โค้ดเรา ไม่มีคุณภาพ เราเลยไม่มีเพื่อนครบ
- 🔥 สุดท้ายเรา ก็ตาย

ทุกข์ สมุทัย นิໂຣ มரຄ

ทุกข์ : กลัวตาย เพราะอาหารติดคอจากเรื่องเล่าวันนี้
สมุทัย : เพราหมี และ ตัวเรา โค้ดมันมีปัญหา
นิໂຣ : เครียดหงุดหงิด และ โมโห
มරຄ : ก็ใช้ GitHub เลยสิครับบบ

เกิดปัญหาอะไรขึ้นได้บ้างนะ ?

- 🔥 เวลาจะเพิ่มฟีเจอร์ หรือ โคดในทีมก็ต้องอัพโหลด ส่งไฟล์กันเองแล้วค่อยมารวม
- 🔥 พ้อเอาจารวมเสร็จแล้วก็ไม่รู้ว่าต้องรวมตรงไหน
- 🔥 ซึ่งพอรู้ว่ารวมตรงไหนเสร็จแล้วโค้ดเรา ก็จะเบิด
- 🔥 พ้อโค้ดเรา จะเบิดเสร็จแล้วเรา ก็จะโน้ม
- 🔥 พ้อโน้มเสร็จแล้วเรา ก็จะร่มหัว
- 🔥 พ้อเริ่มหัวเสร็จแล้วเรา ก็ไปหาอะไรกัน
- 🔥 ด้วยความหัวบากับความโน้มหัว เราเลยเคี้ยวอะไรไม่ดี
- 🔥 พ้อเคี้ยวไม่ดีอาหาร ก็ติดคอ
- 🔥 พ้ออาหารติดคอ เราเลยหาเพื่อนช่วย
- 🔥 ด้วยความที่โค้ดเรา ไม่มีคุณภาพ เราเลยไม่มีเพื่อนครบ
- 🔥 สุดท้ายเรา ก็ตาย

ทุกข์ สมุทัย นิໂຣ มரຄ

ทุกข์ : กลัวตาย เพราะอาหารติดคอ จากเรื่องเล่าวันนี้
สมุทัย : เพราหมี และ ตัวเรา โค้ดมัน มีปัญหา
นิໂຣ : เครียดหงุดหงิด และ โมโห
มරຄ : ก็ใช้ GitHub เลยสิครับ

ເຮັດໃຫ້ GitHub ກໍາຍັງໄງ້ ມາດູ !

The screenshot shows the GitHub homepage with a dark blue background. At the top, there is a navigation bar with links for Product, Solutions, Open Source, and Pricing. On the right side of the header are the Search GitHub input field, a magnifying glass icon, Sign in, and Sign up buttons. Below the header, there is a banner for "GitHub Universe: A global developer event" with a small icon of a cat and a link to register for early bird passes at 20% off. The main headline "Let's build from here, securely" is displayed in large white text. Below the headline, a subtext reads: "The complete developer platform to build, scale, and deliver secure software." There is a white input field for "Email address" and a green "Sign up for GitHub" button. To the right of the main content area is a large, glowing blue globe graphic with pink and blue lines forming a network or path. In the bottom right corner, there is a white square containing a QR code.

สมัครสมาชิกผ่านหน้าเว็บได้เลย



Already have an account? [Sign in →](#)

Welcome to GitHub!
Let's begin the adventure

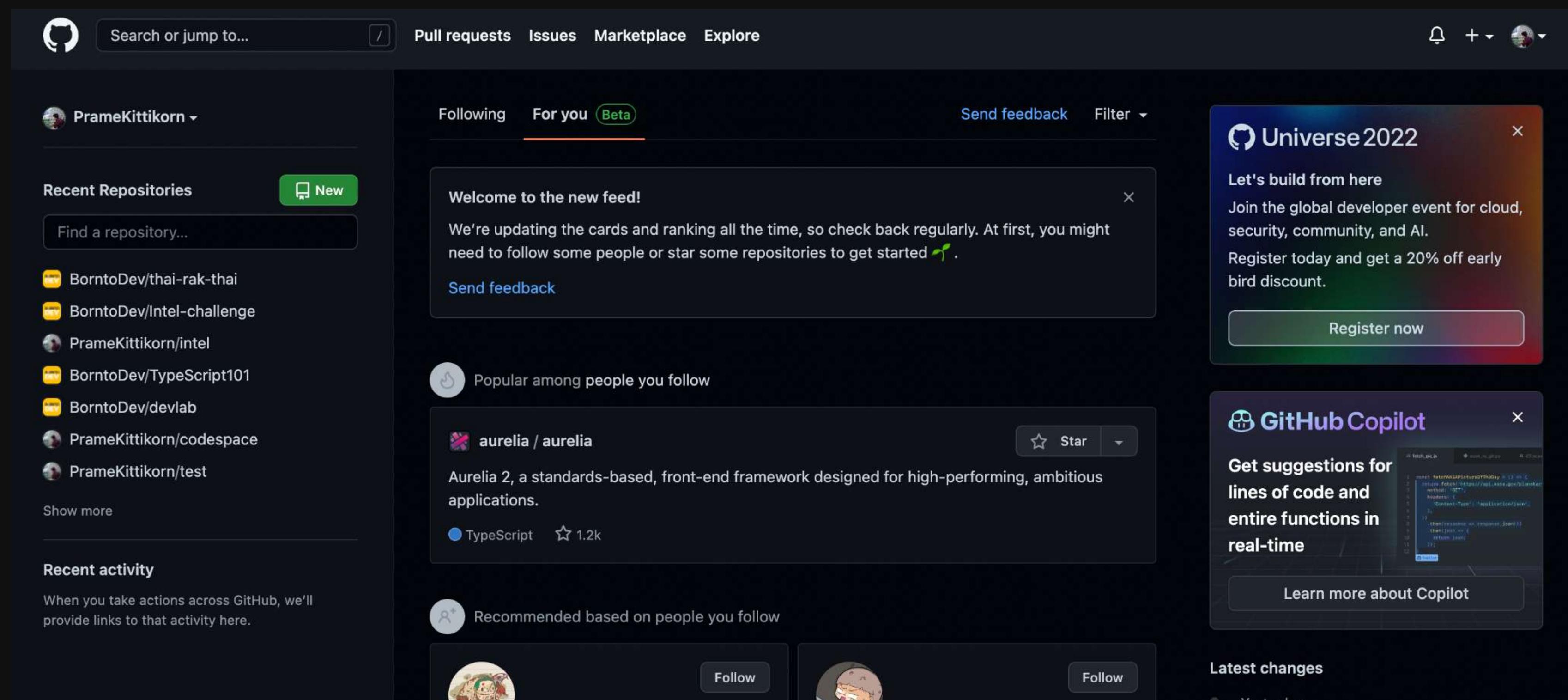
Enter your email



Continue

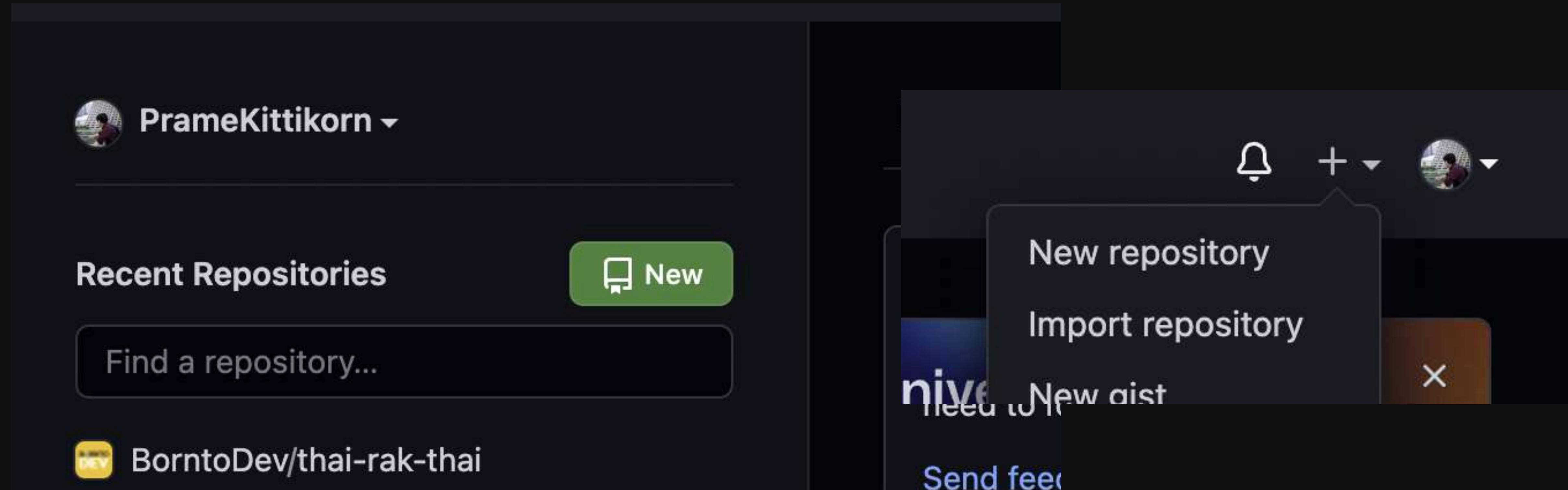
หน้าสมัครสมาชิกก็ล้ำ ๆ ไปเลยจ้า

ເສົ່າງແລ້ວຈະໄດ້ຫຼາຕາປະມານນີ້



ຮະກວ່າງນີ້ກີບປັບແຕ່ງໜ້າຕາກັນ ໃຫ້ແຈ່ນ ຈ ກອນໄດ້ເລຍ !

เสร็จแล้วมองหาปุ่ม New ช้ายมือ



หรือ + -> New repository ขวบນกีได้เช่นกัน

สร้างชื่อ Repository ของเราได้เลย

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository](#).

Repository template

Start your repository with a template repository's contents.

No template ▾

Owner * PrameKittikorn * **Repository name *** /

Great repository names are short and memorable. Need inspiration? How about [super-octo-potato](#)?

Description (optional)

 **Public**
Anyone on the internet can see this repository. You choose who can commit.

 **Private**
You choose who can see and commit to this repository.

มันคือที่เก็บไฟล์ ไว้จัดการงาน โปรเจกต์ของเรานั่นแหล่ะ

สร้างชื่อ Repository ของเราได้เลย

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository](#).

Repository template
Start your repository with a template repository's contents.

No template ▾

Owner *  PrameKittikorn | **Repository name *** DevTips ✓

Great repository names are short and memorable. Need inspiration? How about [super-octo-potato](#)?

Description (optional)
กิจกรรมการ ๆ ของการเดฟแบบทิพย์ๆ

 **Public**
Anyone on the internet can see this repository. You choose who can commit.

 **Private**
You choose who can see and commit to this repository.

ວ່າແຕ່ເຈົ້າພື້ນທີ່ນີ້ເຂົາໃຫ້ມາເກົ່າໄຮສະ ?

 GitHub Free
The basics for all developers

<ul style="list-style-type: none">∞ Unlimited public/private repos∞ Unlimited collaborators✓ 2,000 Actions minutes/month✓ 500MB of Packages storage✓ Community support	<p>Not included:</p> <ul style="list-style-type: none">✗ Protected branches on all repos✗ Access to Codespaces✗ Multiple reviewers in pull requests✗ Required status checks✗ Code owners✗ Required reviewers✗ Pages for static website hosting✗ Web-based support
--	---

[See all features and compare plans](#)

ສ່າງຊື່ Repository ຂອງໄຮດ້ເລຍ

The screenshot shows a dark-themed GitHub interface. At the top, it says "Add .gitignore" and "Choose which files not to track from a list of templates. [Learn more.](#)". Below this is a dropdown menu labeled ".gitignore template: None". A modal window titled ".gitignore template" is open, displaying a list of templates. The list includes: None (selected), Actionscript, Ada, Agda, Android, AppEngine, AppceleratorTitanium, ArchLinuxPackages, Autotools, C, C++, and CFWheels. There is also a "Filter..." input field. At the bottom of the modal, it says "None is the default template for this repository" and "Change the default name in your settings." The footer of the page includes "© 2022 GitHub, Inc.", "Contact GitHub", "Pricing", "API", "Training", "Blog", and "About".

Add .gitignore

Choose which files not to track from a list of templates. [Learn more.](#)

.gitignore template: None

.gitignore template

Filter...

None

Actionscript

Ada

Agda

Android

AppEngine

AppceleratorTitanium

ArchLinuxPackages

Autotools

C

C++

CFWheels

None is the default template for this repository

Change the default name in your settings.

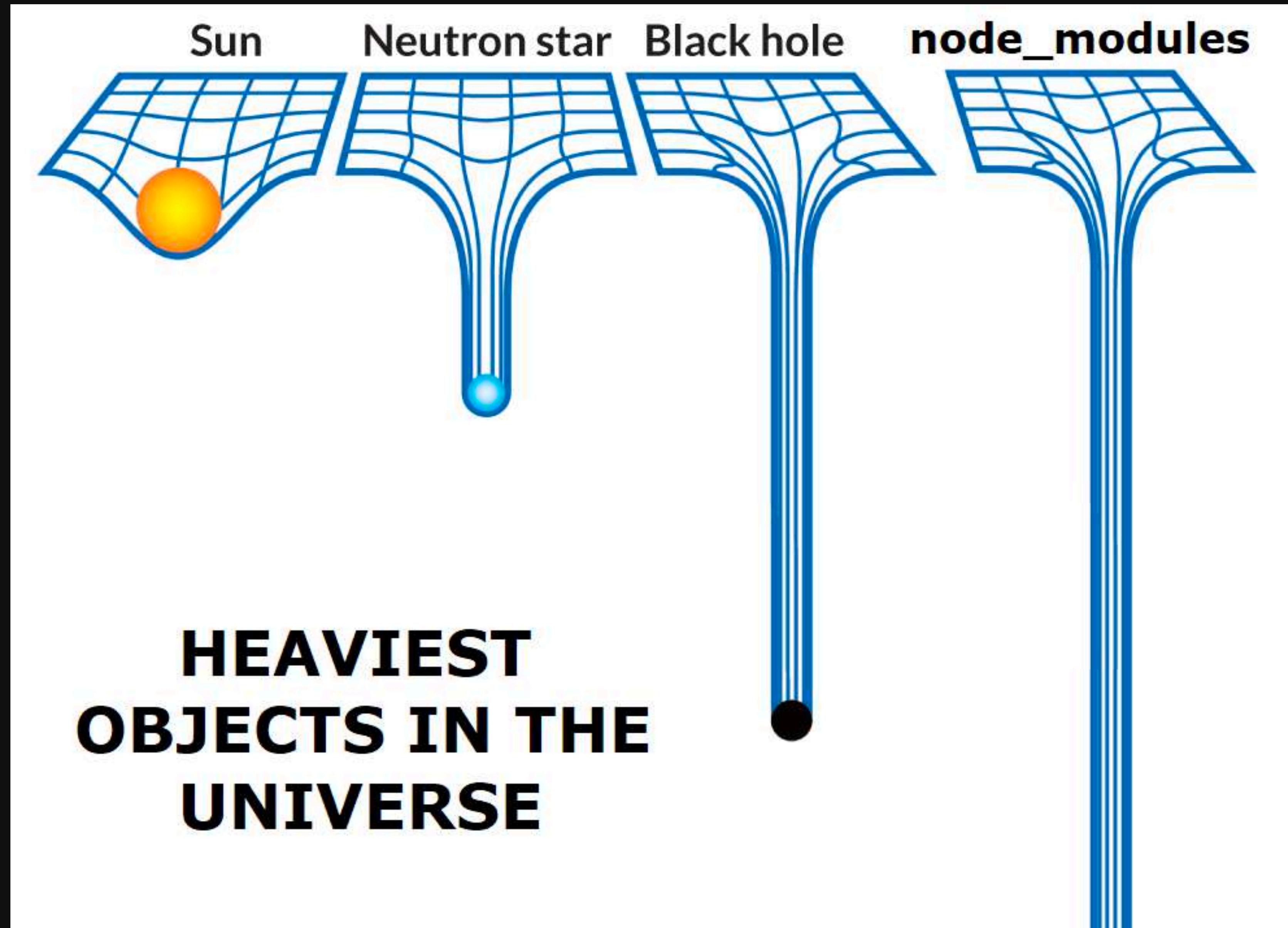
repository

across tools and uses automation to remove manual steps and simplify your code. Learn more.

personal account.

© 2022 GitHub, Inc.

Contact GitHub Pricing API Training Blog About



ສ່າງຊື່ Repository ຂອງໄຈໄດ້ເລຍ

Initialize this repository with:
Skip this step if you're importing an existing repository.

Add a README file
This is where you can write a long description for your project. [Learn more.](#)

Add .gitignore
Choose which files not to track from a list of templates. [Learn more.](#)

.gitignore template: **None ▾**

Choose a license
A license tells others what they can and can't do with your code. [Learn more.](#)

License: **None ▾**

This will set **main** as the default branch. Change the default name in your [settings](#).

Grant your Marketplace apps access to this repository
You are subscribed to 1 Marketplace app

Jira Software + GitHub
GitHub for Jira synchronizes development across tools and uses automation to remove manual steps and shorten delivery time

 You are creating a private repository in your personal account.

Create repository

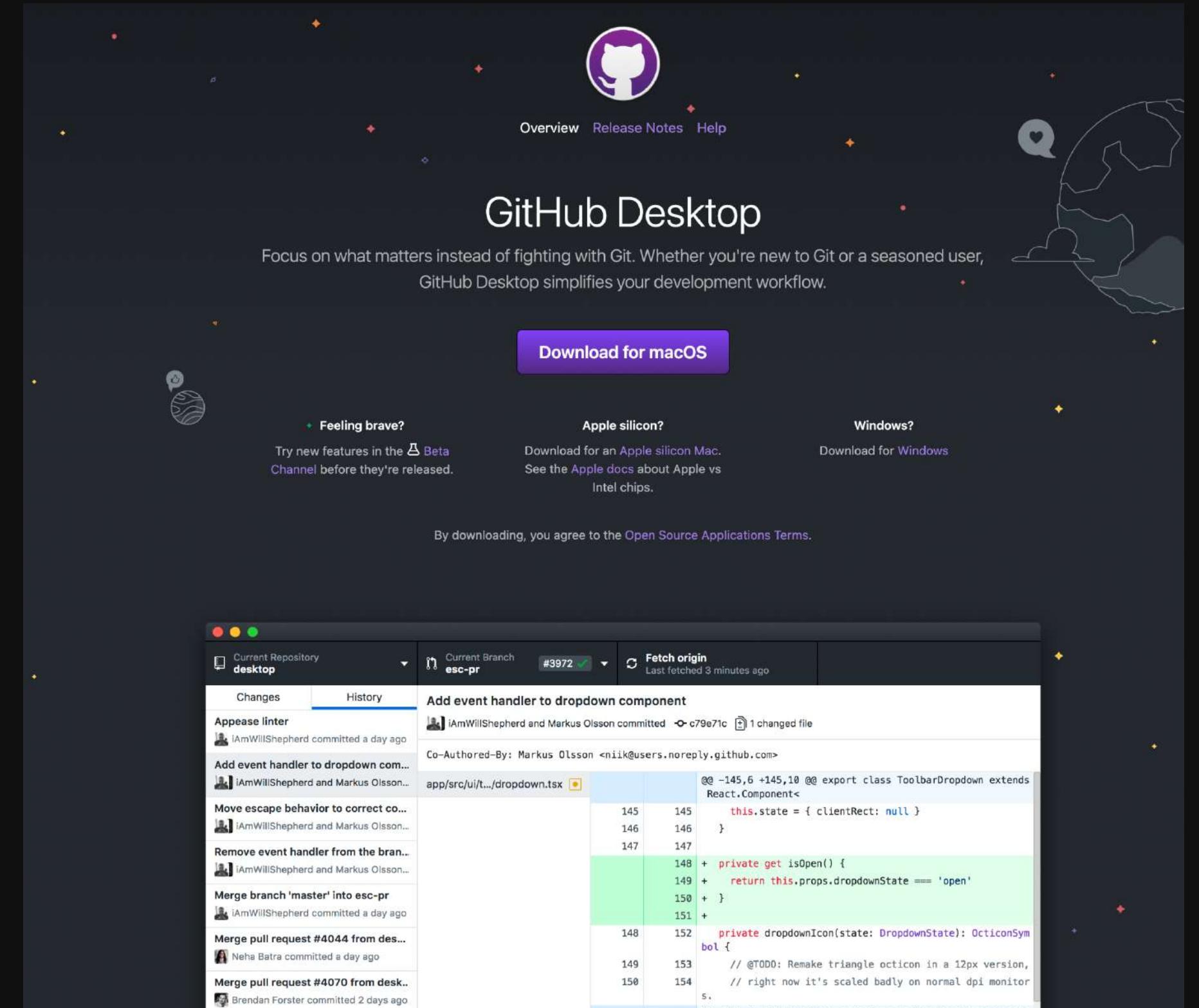
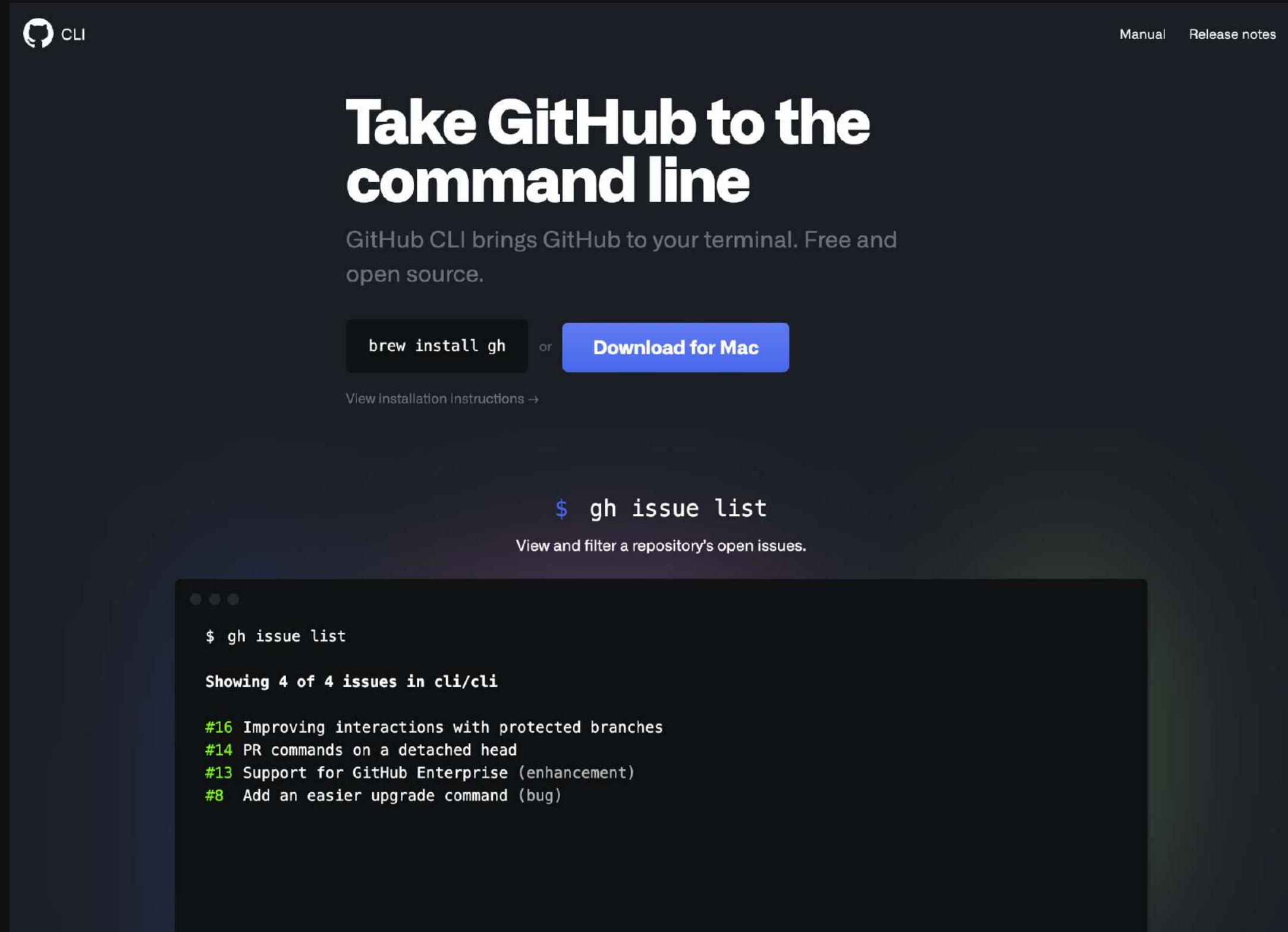
ຕ້ອນມາຮາຈະໄດ້ Repository ບອງເຮົາແລວນັ້ນເອງງ

The screenshot shows a GitHub repository page for 'PrameKittikorn / DevTips'. The repository is private, indicated by a 'Private' badge. The main navigation bar includes links for Code, Issues, Pull requests, Actions, Projects, Security, Insights, and Settings. The 'Code' tab is selected.

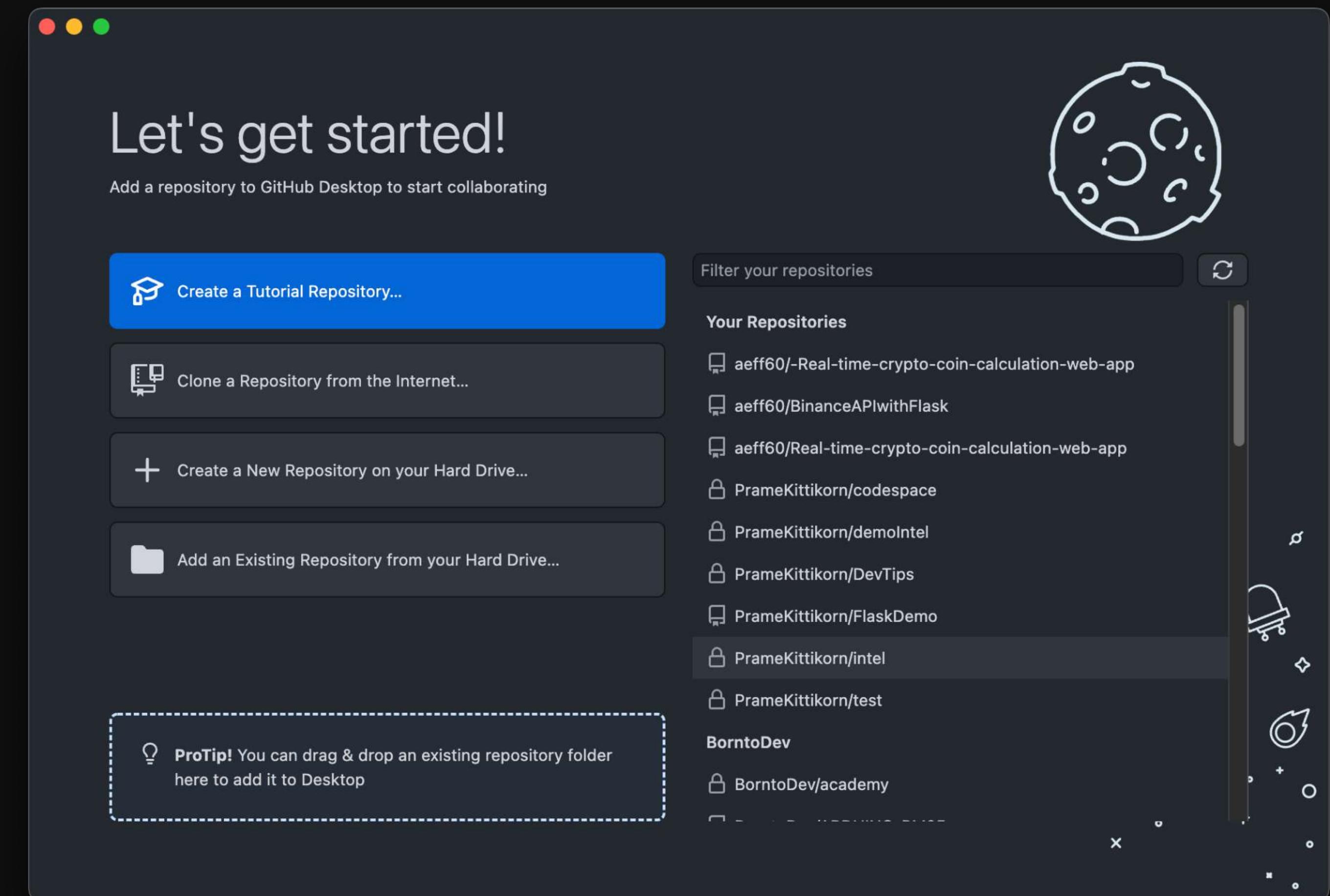
Key statistics shown on the left: main branch, 1 branch, 0 tags. A commit history section shows a single commit from 'PrameKittikorn' titled 'Initial commit' made 'now' with a timestamp of '74b9073 now'. The commit message is 'Initial commit'. Below the commit history is a preview of the 'README.md' file, which contains the text 'DevTips' and 'ກິຈกรรมກາງ ຈຸ່ຂອງການເດີຟແບນທີພຍໍາ'.

The right sidebar contains sections for 'About', 'Releases', and 'Packages'. The 'About' section includes a description of the repository as 'ກິຈกรรมກາງ ຈຸ່ຂອງການເດີຟແບນທີພຍໍາ', a 'Readme' link, 0 stars, 1 watching, and 0 forks. The 'Releases' section indicates 'No releases published' and 'Create a new release'. The 'Packages' section indicates 'No packages published' and 'Publish your first package'.

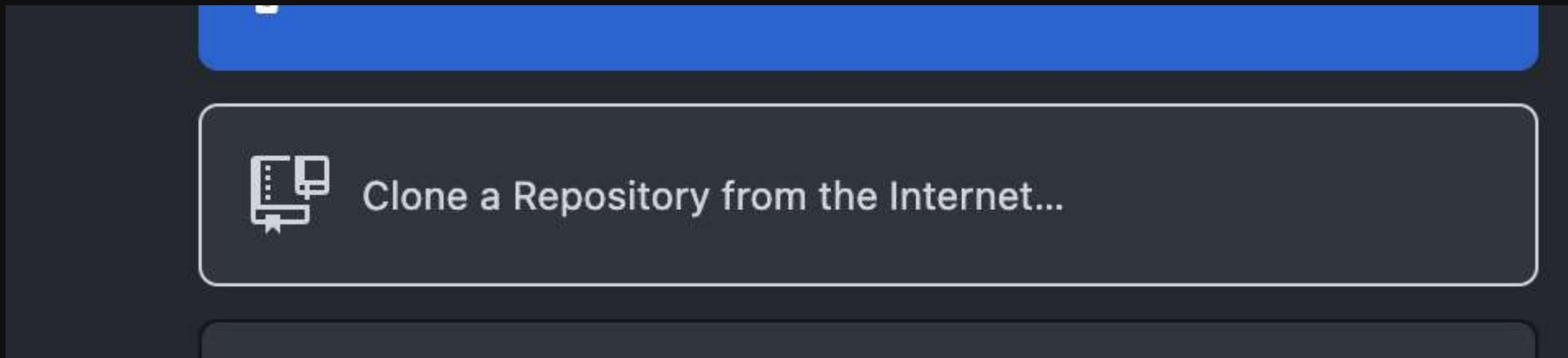
สำหรับการใช้งานนั้นแบ่งออกเป็นสองสาย



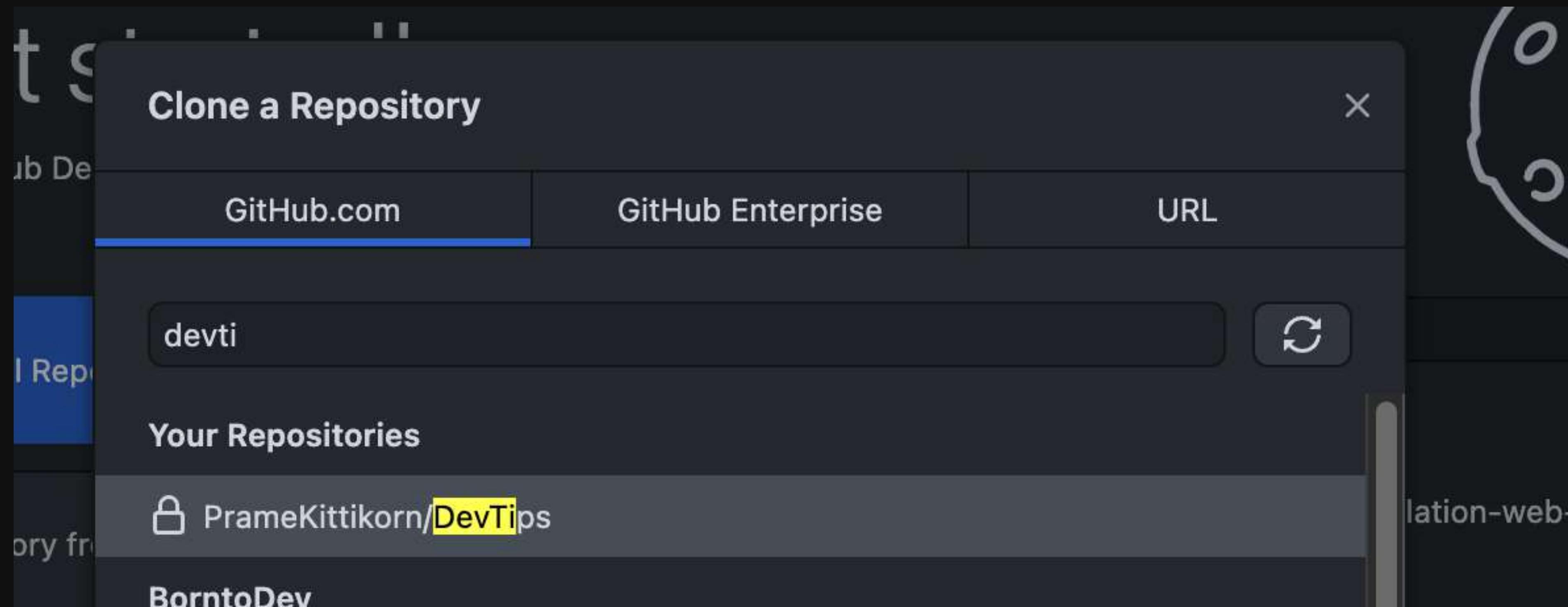
ดาวน์โหลดตัว GitHub GUI และ เชื่อมต่อเข้าด้วยกัน



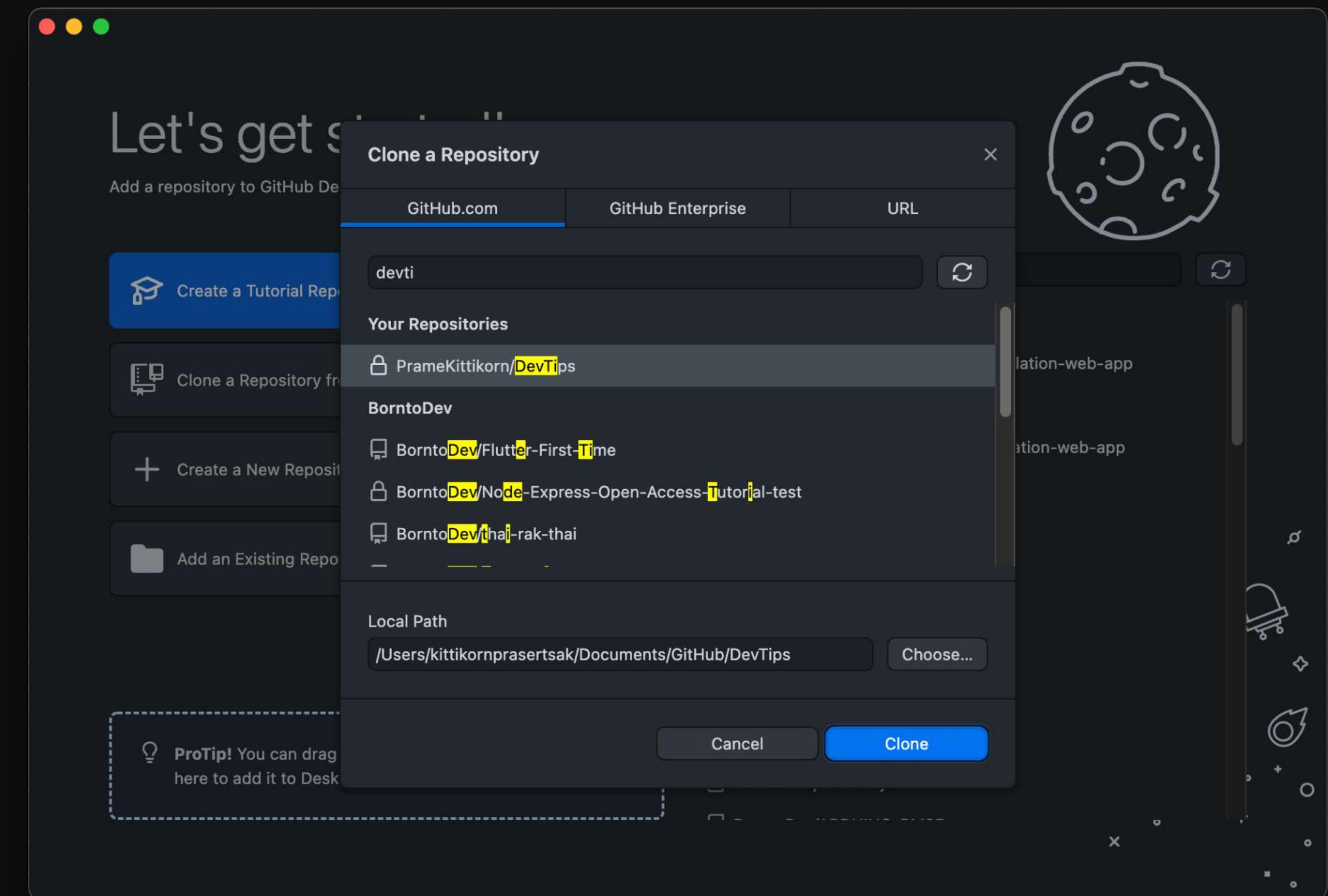
ກຳກຳClone Repository ໄກສອງມາໃນເຄຮືອງ



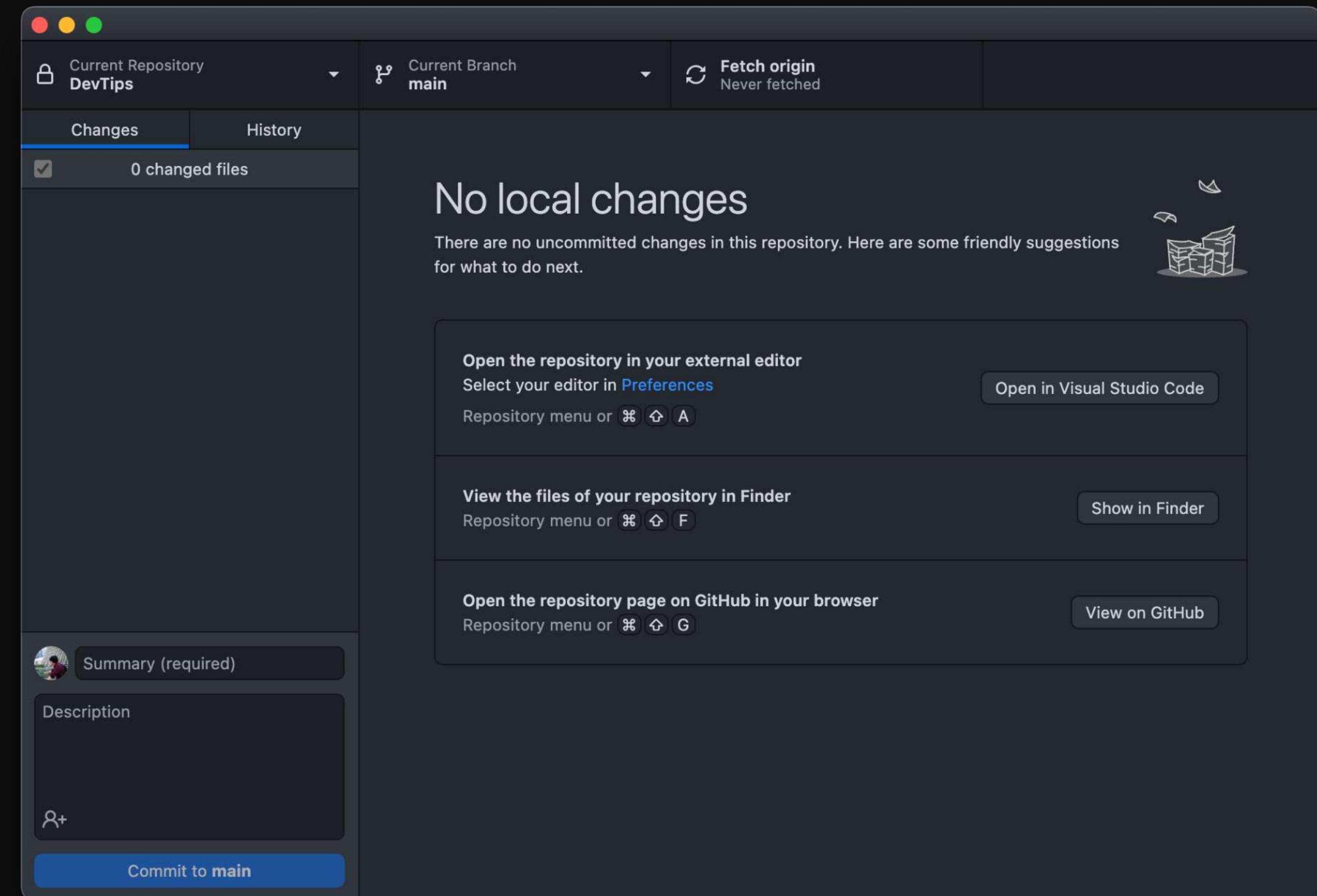
ກຳກຳClone Repository ໄສາລົງມາໃນເຄື່ອງ



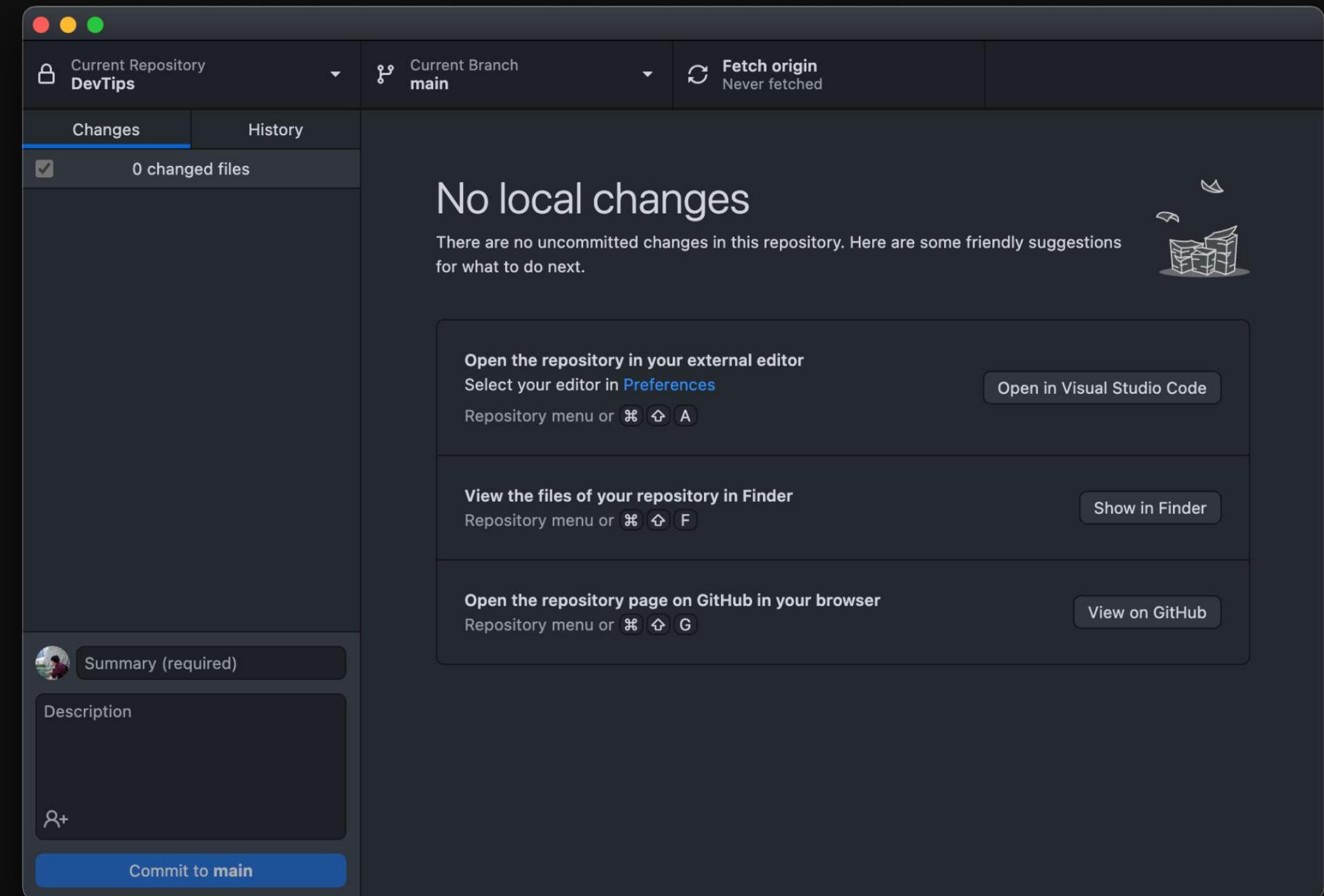
ກຳກຳClone Repository ໃຫ້າງມາໃນເຄື່ອງ



ແອຣ ! ແກນີ້ກັບມາແລ້ວ !



ອວ ! ແກນີ້ກັບມາແລ້ວ !

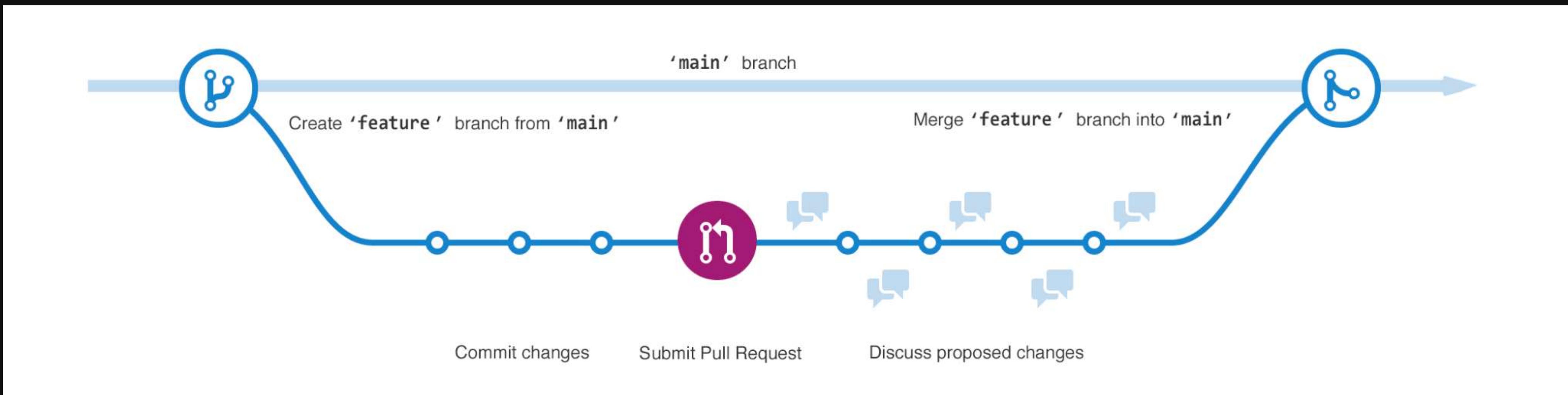


ກາຍໃນນີ້ເຮົາສາມາດເກີບທຸກສິ່ງທີ່ເຮົາອາຍາເກີບໄດ້ເລຍ

ຮອງຄົກທີ່ Current Branch

The screenshot shows the GitHub interface for a repository named 'DevTips'. The top navigation bar displays the repository name, the current branch ('main'), and a note that 'Fetch origin' has never been fetched. Below the navigation bar, there are three tabs: 'Changes' (selected), 'History', and 'Branches'. The 'Changes' tab indicates '0 changed files'. The 'Branches' tab is active, showing a 'Default Branch' section with one entry: 'main' (checked) and '11 minutes ago'. A 'Filter' input field and a 'New Branch' button are also visible in this section. To the right of the branches, there is a sidebar with the text 'Here are some friendly suggestions' and a small icon of a stack of books. At the bottom right of the main content area, there is a button labeled 'Open in Visual Studio Code'.

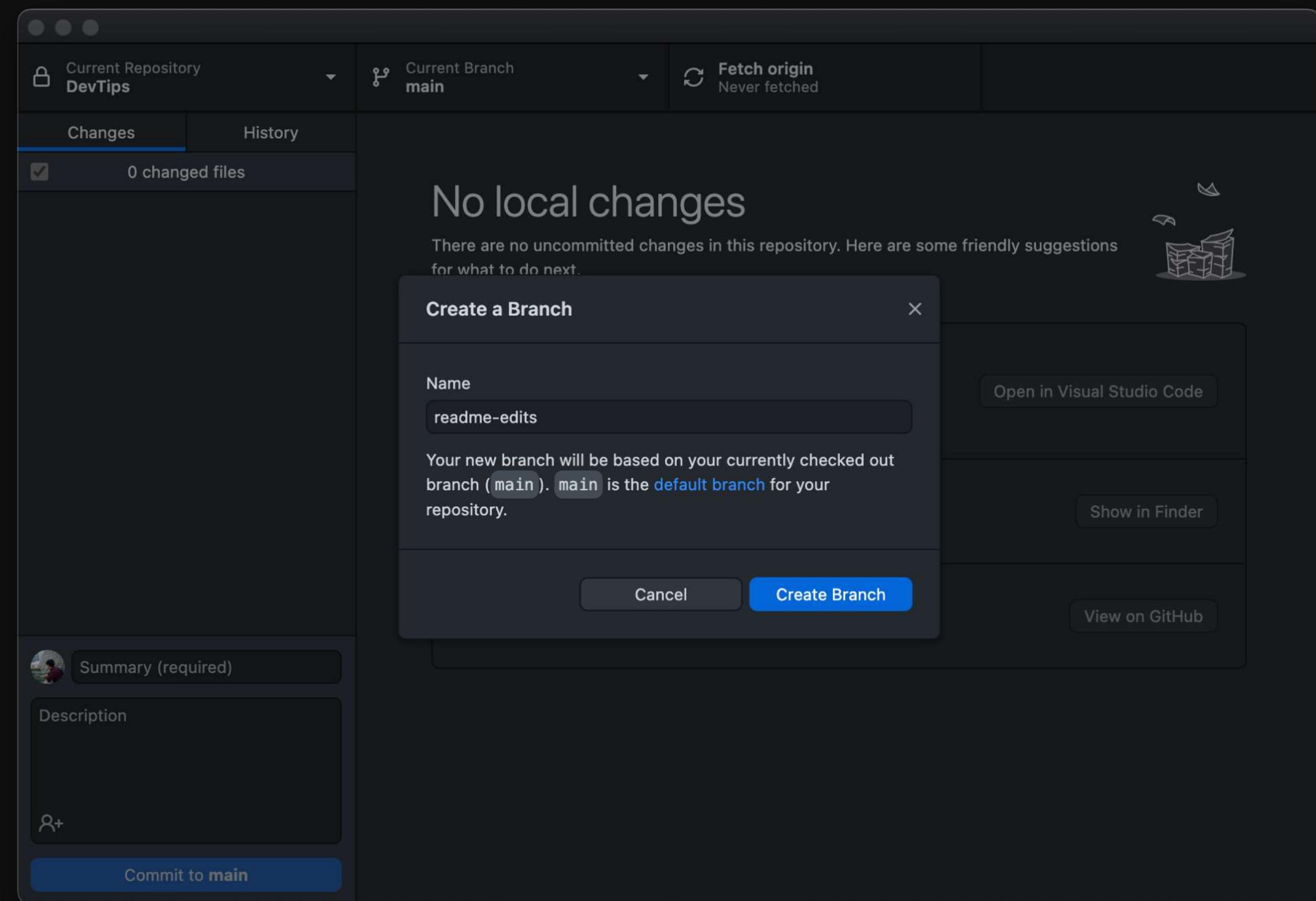
រូចក និង សរាង Branch



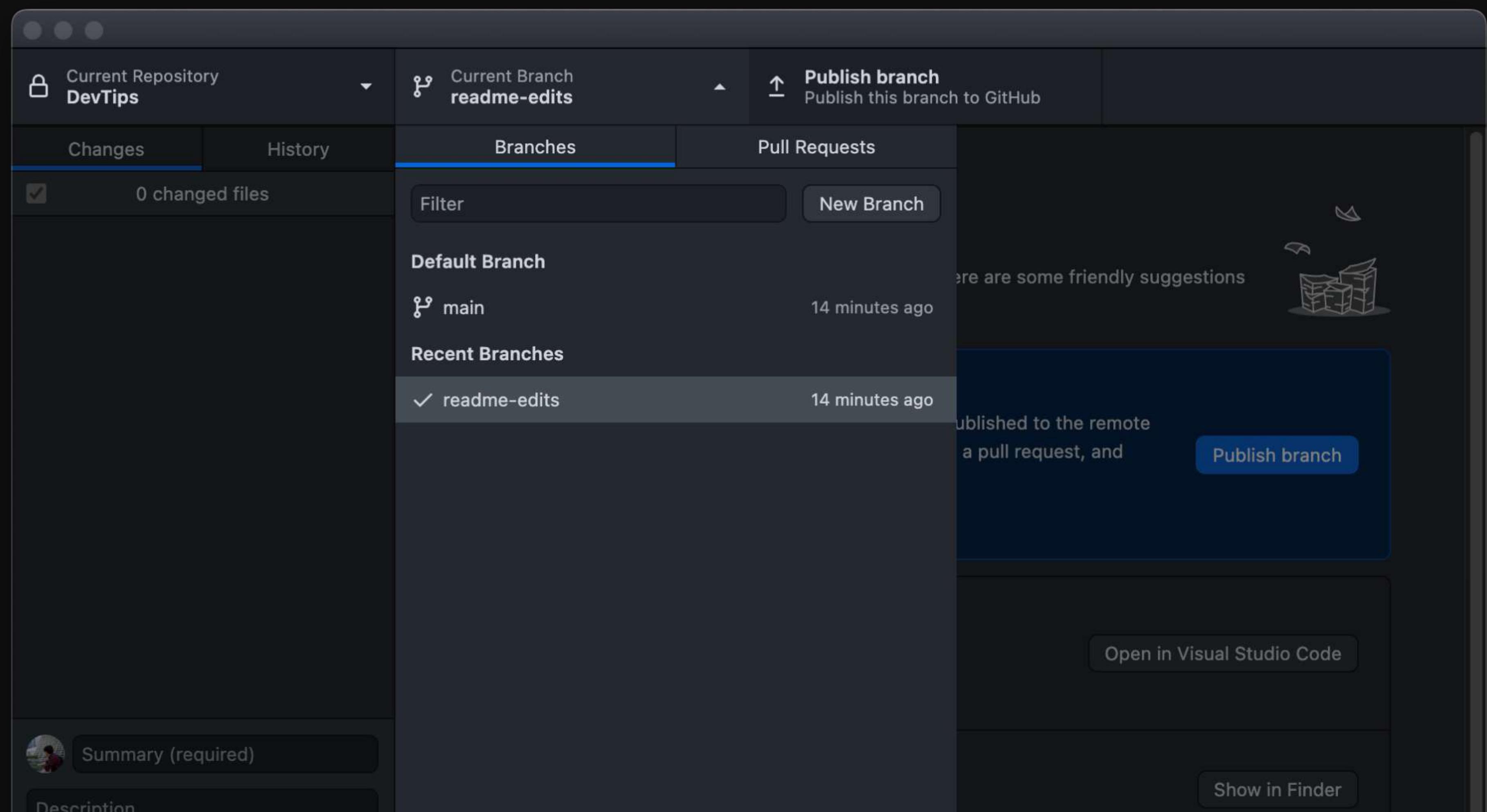
ការកែតម្រូវ New Branch

The screenshot shows the GitHub repository interface for the 'DevTips' repository. The top navigation bar displays the repository name 'DevTips', the current branch 'main', and a note 'Fetch origin Never fetched'. Below the navigation bar, there are three tabs: 'Changes' (selected), 'History', and 'Branches'. The 'Branches' tab is currently active, showing a 'Default Branch' section with a single entry: 'main' (checked) and '11 minutes ago'. To the right of the branches, there is a 'Pull Requests' section with a note 'Here are some friendly suggestions' and a 'New Branch' button. A callout bubble points to the 'New Branch' button with the text 'Open in Visual Studio Code'.

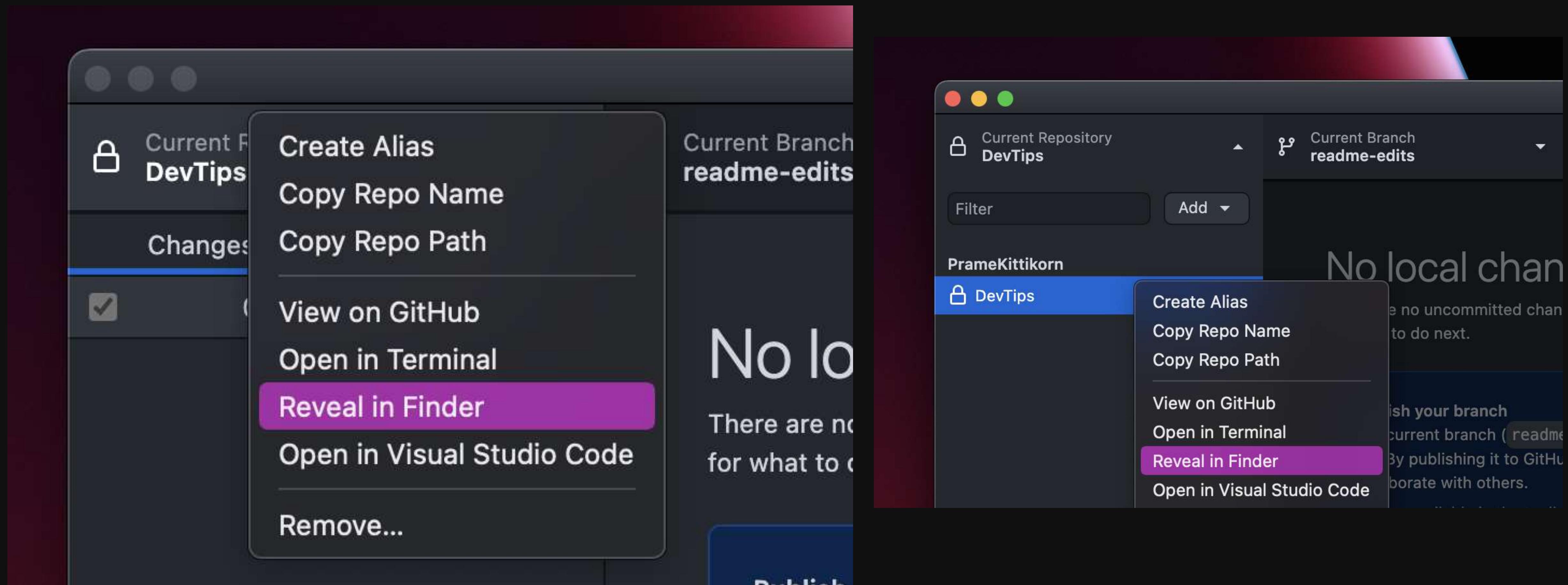
ຕັ້ງຫຼືວ Branch ໃນບ່ອນເຮົາໄດ້ເລືອຈ້າ !



ສັງເກດໃຫ້ດ້ວຍນະວ່າໃນຕອນນີ້ເຮາອງຢູ່ທີ່ Branch ໄກу ?

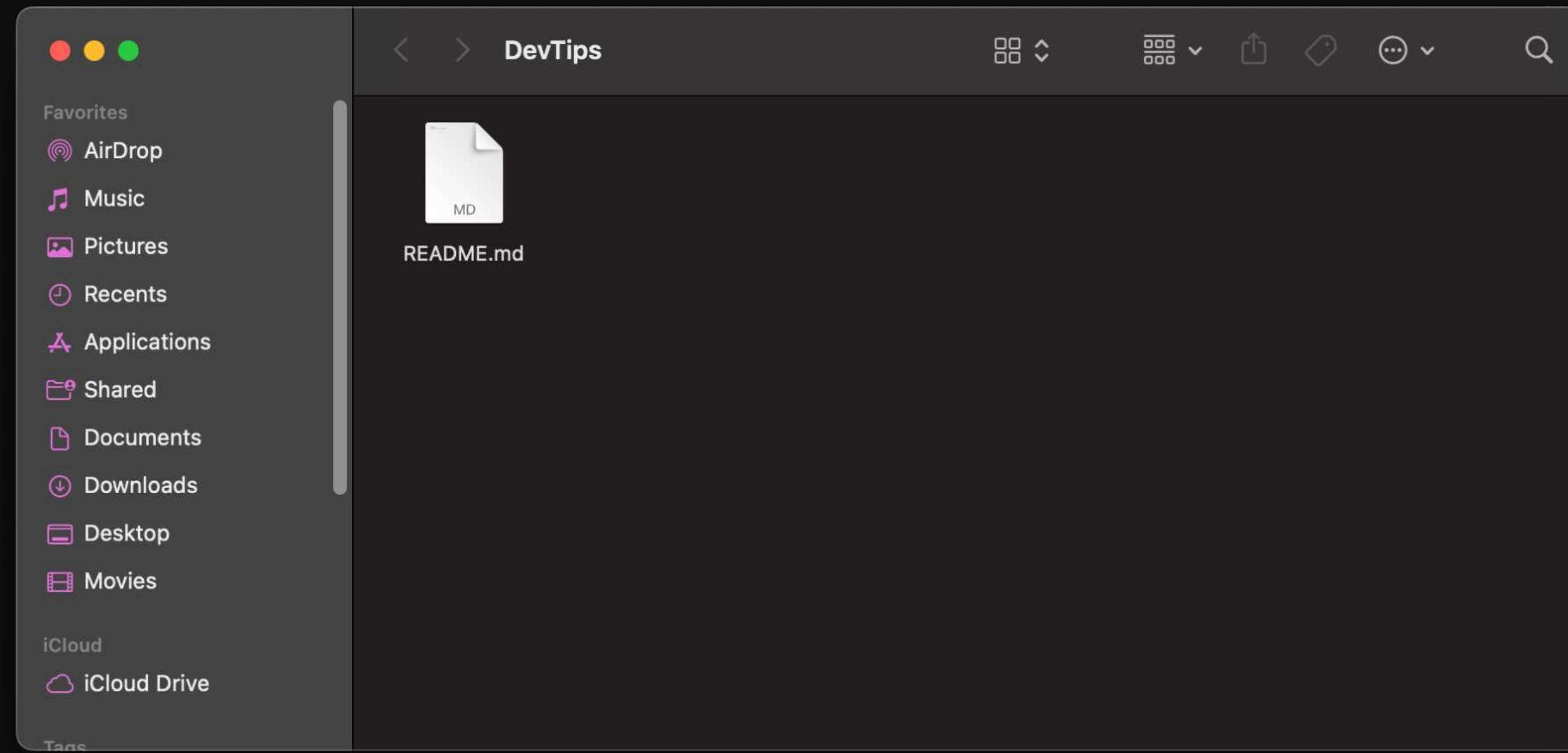


ถ้าอยากเพิ่มไฟล์โปรเจกต์งานเรา หรือ จัดการ Repo กำยังไง ?



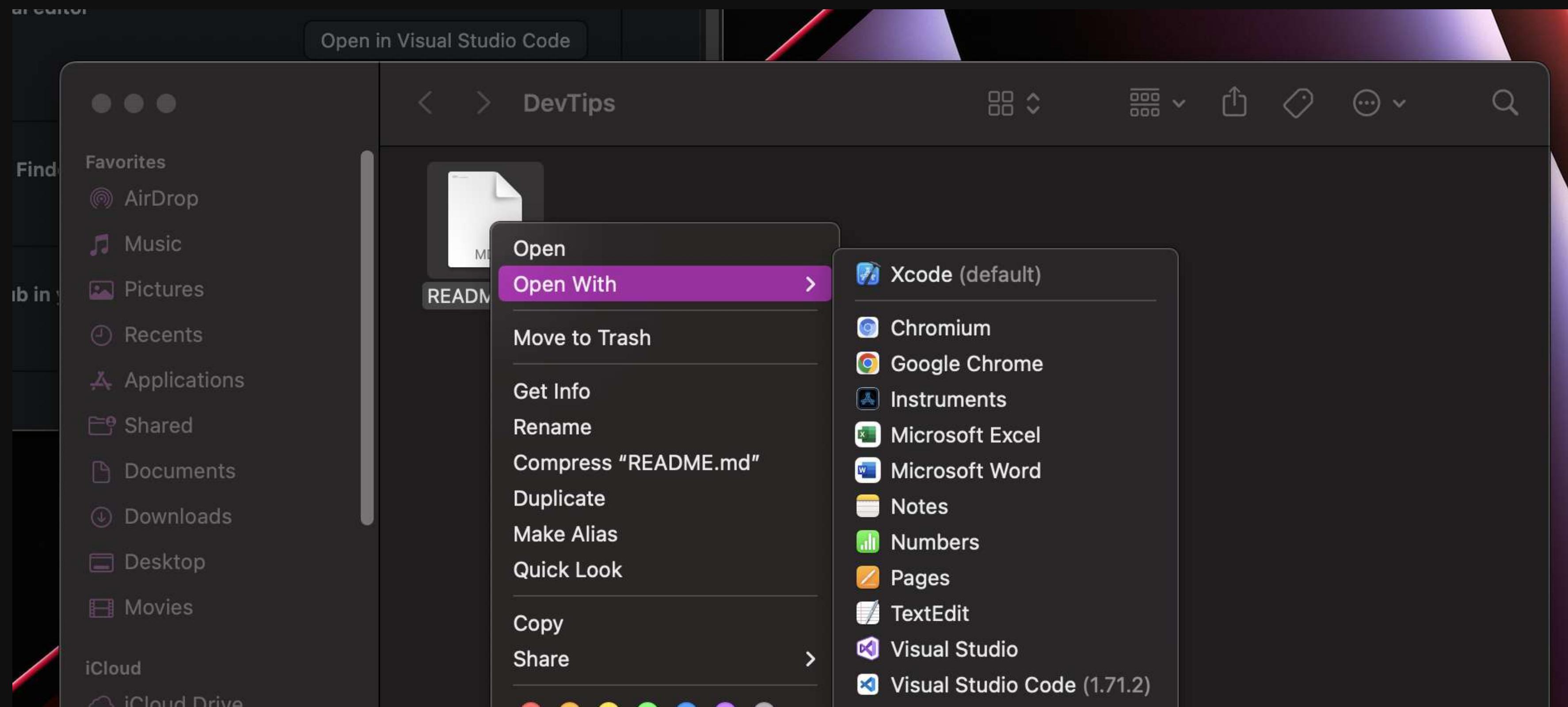
คลิกขวา แล้วเปิดที่ Finder หรือ File Explorer ก็ได้

จะพบร่วมกับการสร้างฟลเดอร์ให้เราแล้วจ้า

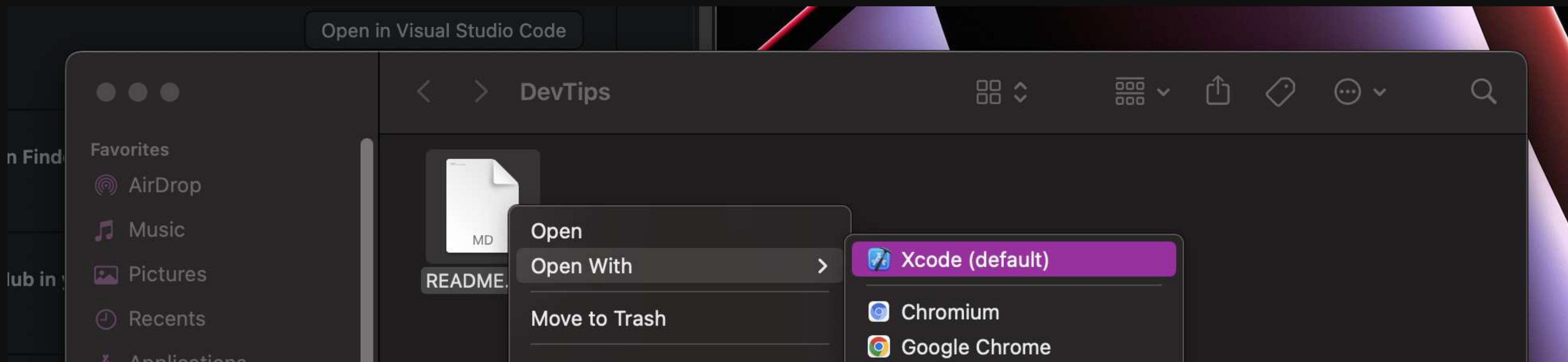


ลองไปดูเล่นกันได้เลย มีไฟล์ Readme.md มาให้แล้วด้วย

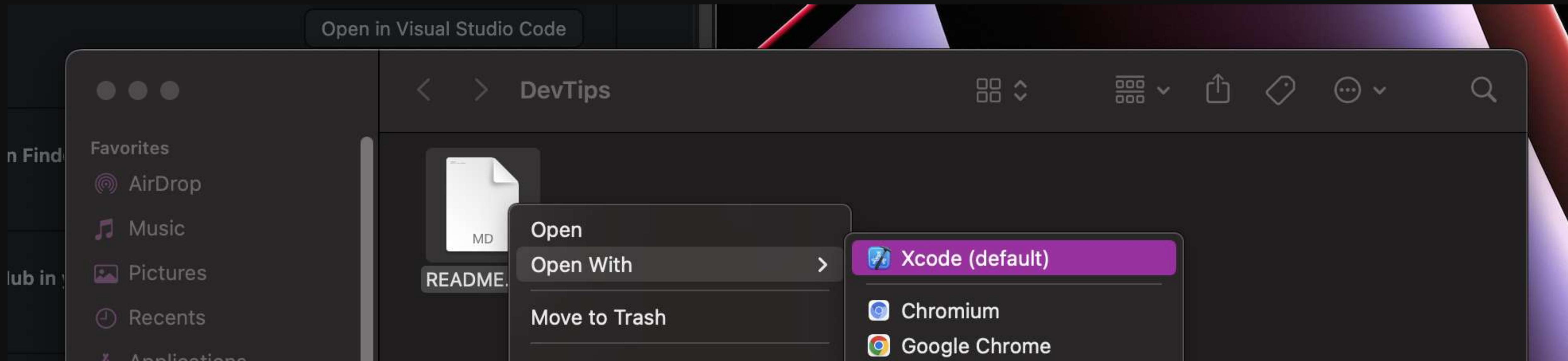
สำหรับใครที่มือใหม่เราสามารถลองเปิดไฟล์ดังกล่าวดูได้เลย



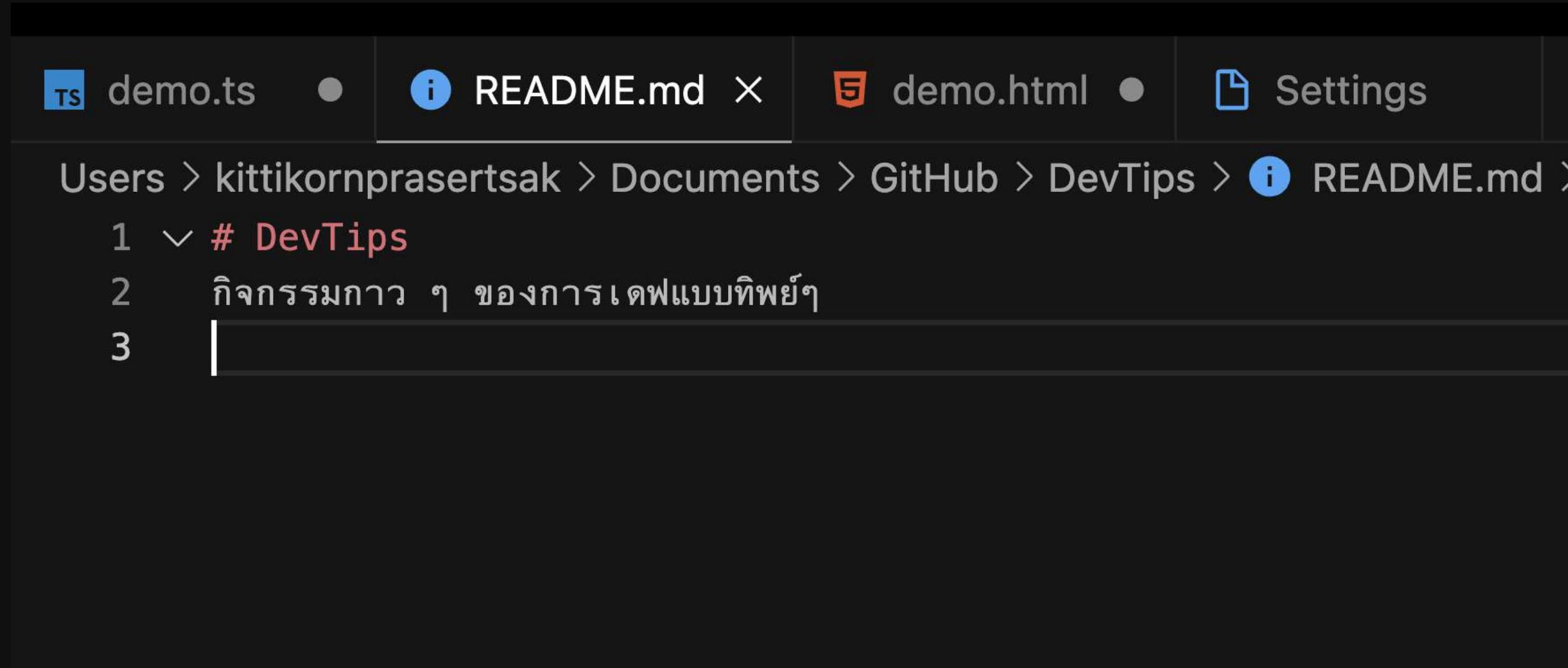
ก็คลิกขวาแล้วก็กด Open With แล้วก็ตามด้วย ..



ASU ..



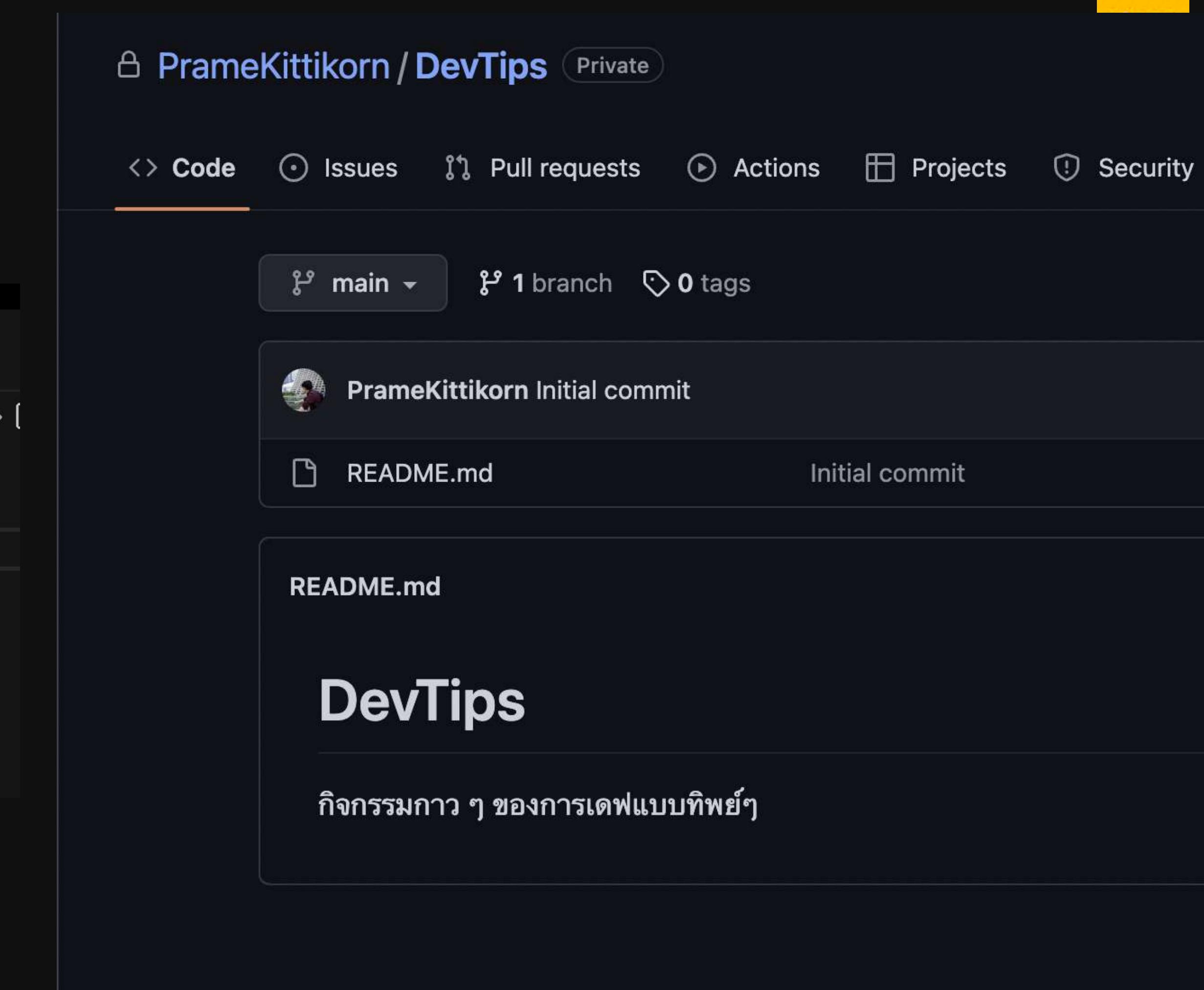
ASU ..



demo.ts README.md demo.html Settings

Users > kittikornprasertsak > Documents > GitHub > DevTips > README.md

```
1 # DevTips
2 กิจกรรมก้าว ๆ ของการเดฟแบบทิพย์ๆ
3
```



PrameKittikorn / DevTips Private

Code Issues Pull requests Actions Projects Security

main 1 branch 0 tags

PrameKittikorn Initial commit

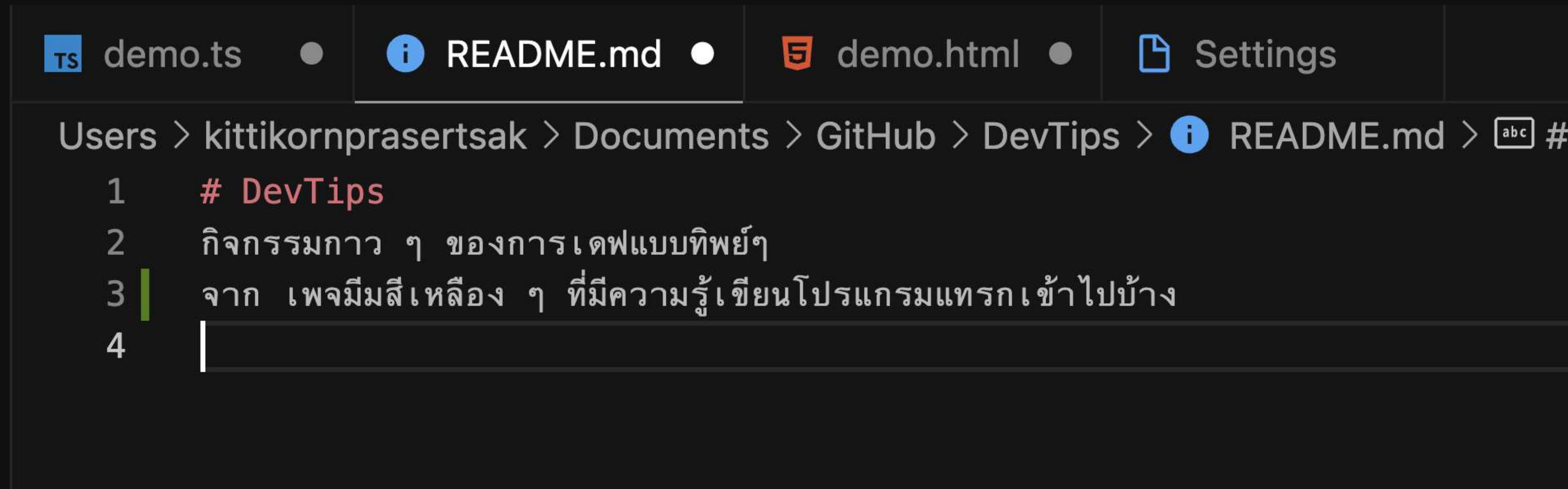
README.md Initial commit

README.md

DevTips

กิจกรรมก้าว ๆ ของการเดฟแบบทิพย์ๆ

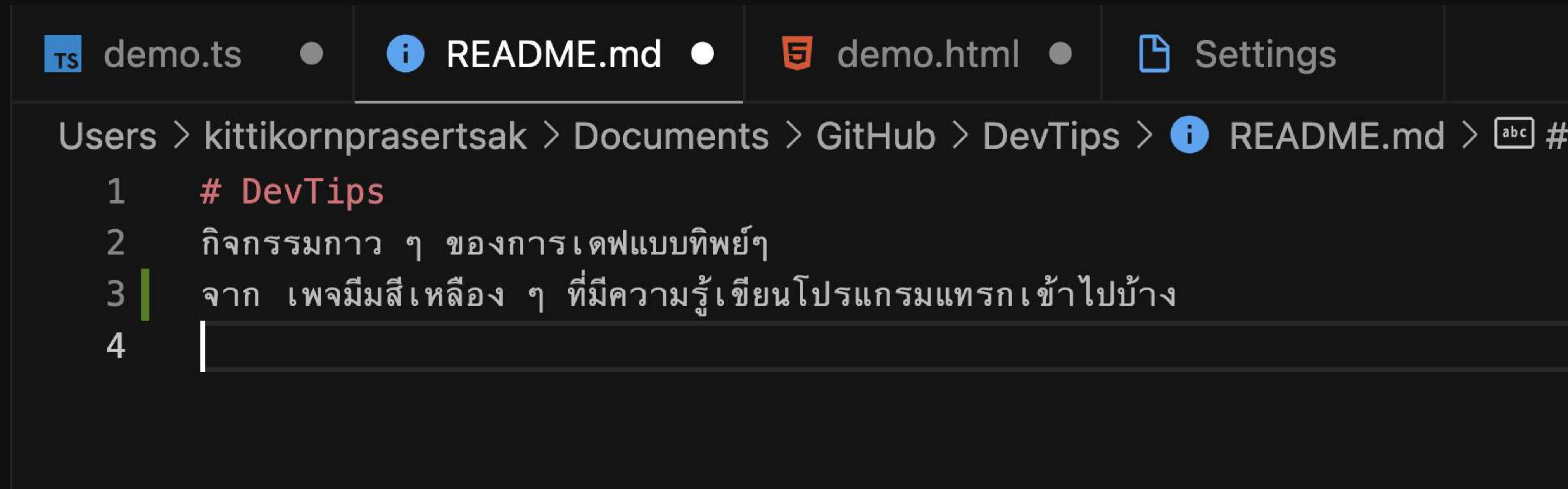
พอเราเปิดดูเราจะจะพบไฟล์ README.md ॥อ่า



The screenshot shows a dark-themed instance of Visual Studio Code. At the top, there is a tab bar with four items: 'demo.ts' (with a blue icon), 'README.md' (with a blue info icon), 'demo.html' (with an orange icon), and 'Settings' (with a blue folder icon). Below the tab bar, the file path is displayed: 'Users > kittikornprasertsak > Documents > GitHub > DevTips > README.md'. The main editor area contains the following text:

```
1 # DevTips
2 กิจกรรมก้าว ๆ ของการเดฟแบนทิพย์ฯ
3 | จาก เพจมีมสีเหลือง ๆ ที่มีความรู้เขียนโปรแกรมแทรกเข้าไปบ้าง
4 |
```

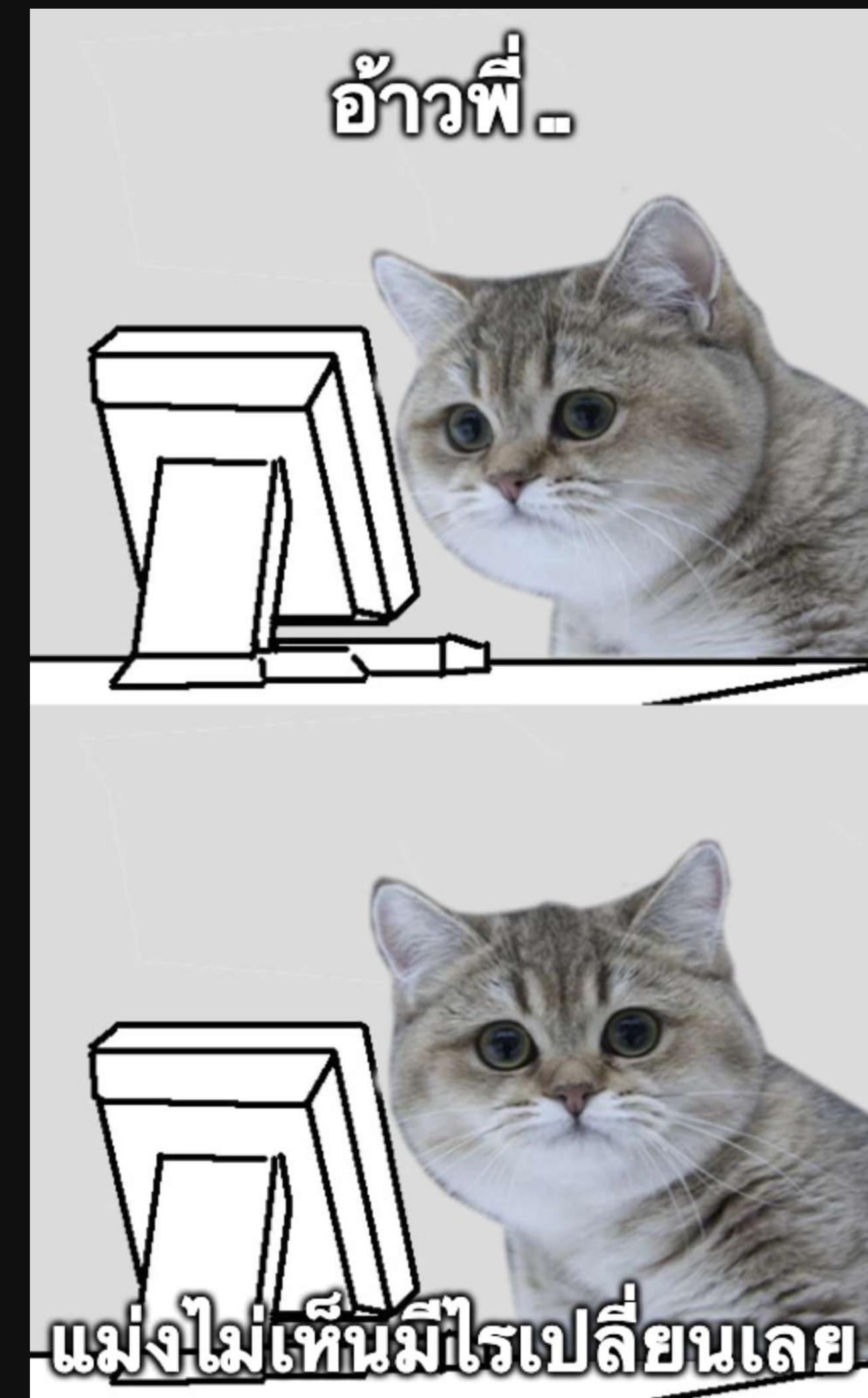
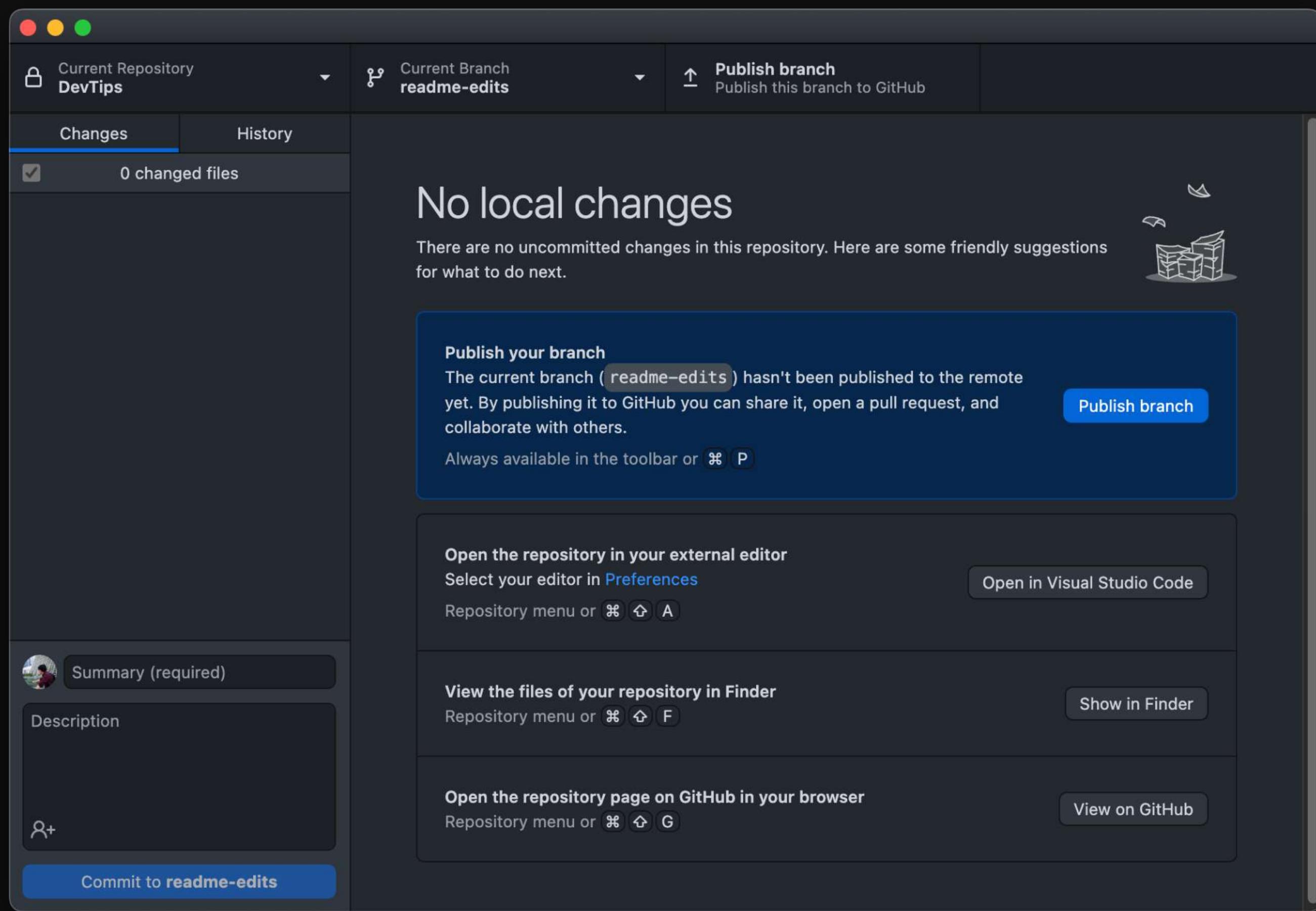
เราจะลองแก้ไขความเพิ่มข้อมูลลงมาใน README.md

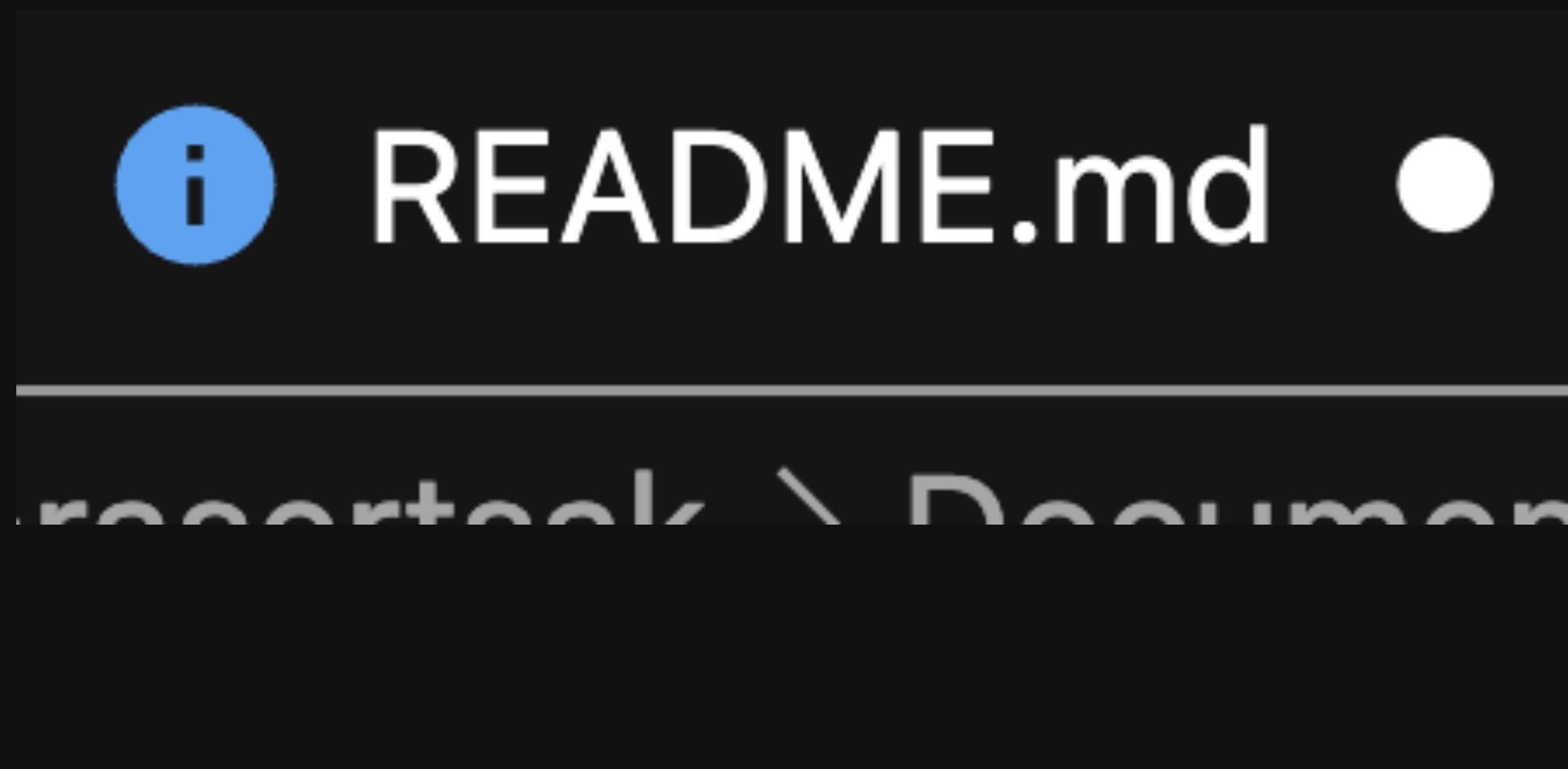


The screenshot shows a GitHub repository interface. At the top, there are four tabs: demo.ts (blue), README.md (selected, blue), demo.html (orange), and Settings (blue). Below the tabs, the repository path is displayed: Users > kittikornprasertsak > Documents > GitHub > DevTips > README.md. The README.md file content is shown below:

```
1 # DevTips
2 กิจกรรมก้าว ๆ ของการเดฟแบนทิพย์ๆ
3 จาก เพจมีมสีเหลือง ๆ ที่มีความรู้เขียนโปรแกรมแทรกเข้าไปบ้าง
4 |
```

แล้วลองกลับไปดูหน้าหลักของ我们在 GitHub GUI





ຄຮບບ

Current Branch
adme-edits

↑ Publish branch
Publish this branch to GitHub

E.md

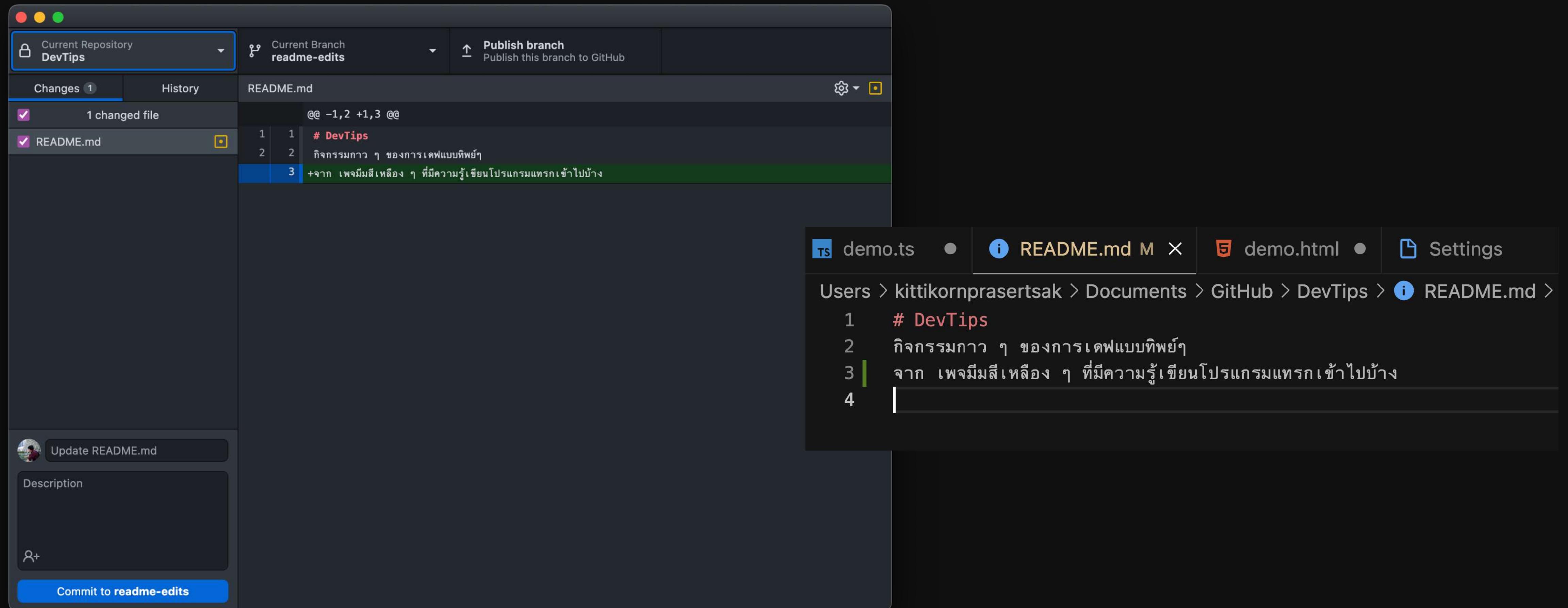
@@ -1,2 +1,3 @@

1 # DevTips

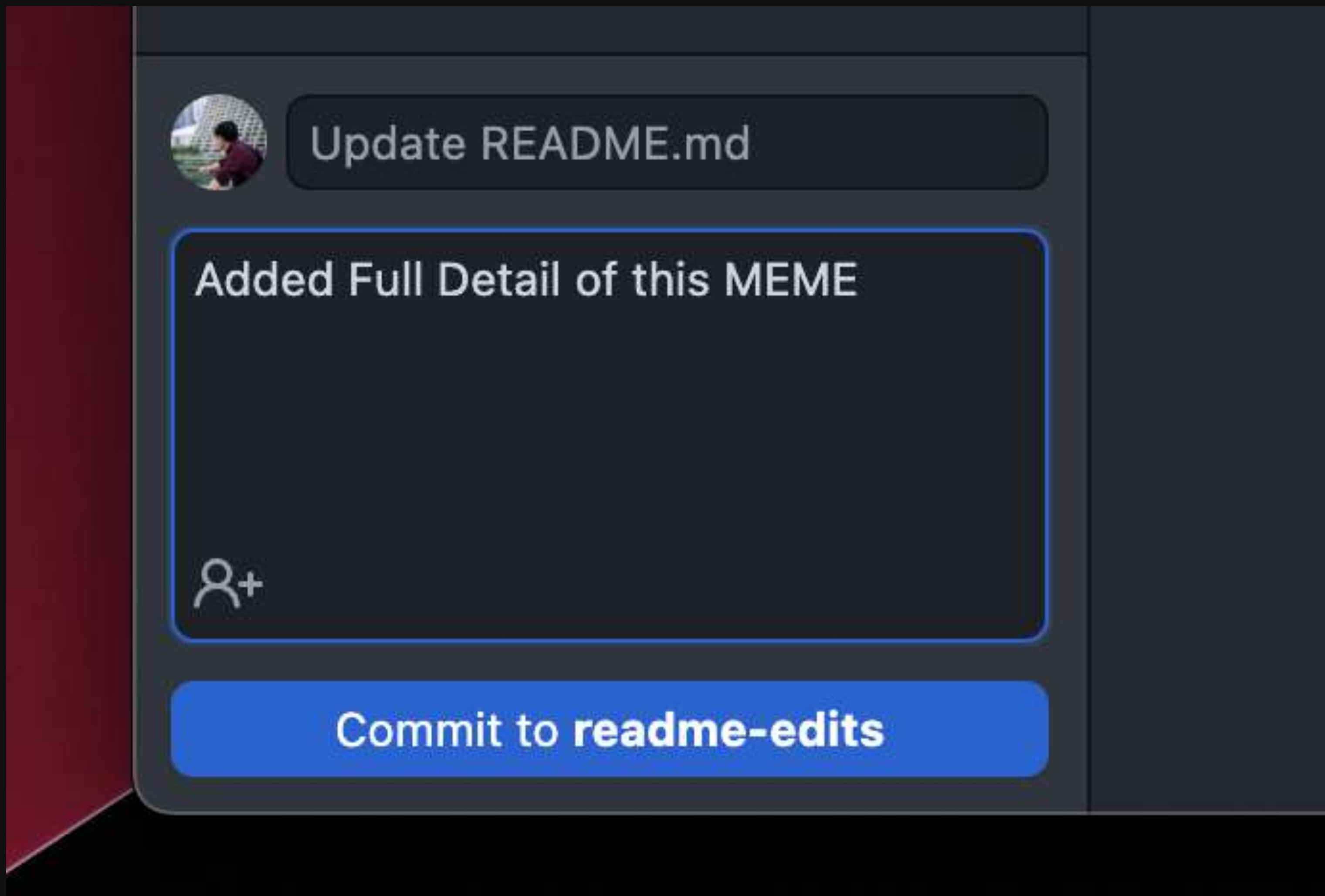
2 กิจกรรมการ ๆ ของการเดฟแบนทิพย์ๆ

3 +จาก เพจมีสีเหลือง ๆ ที่มีความรู้เขียนโปรแกรมแทรกเข้าไปบ้าง

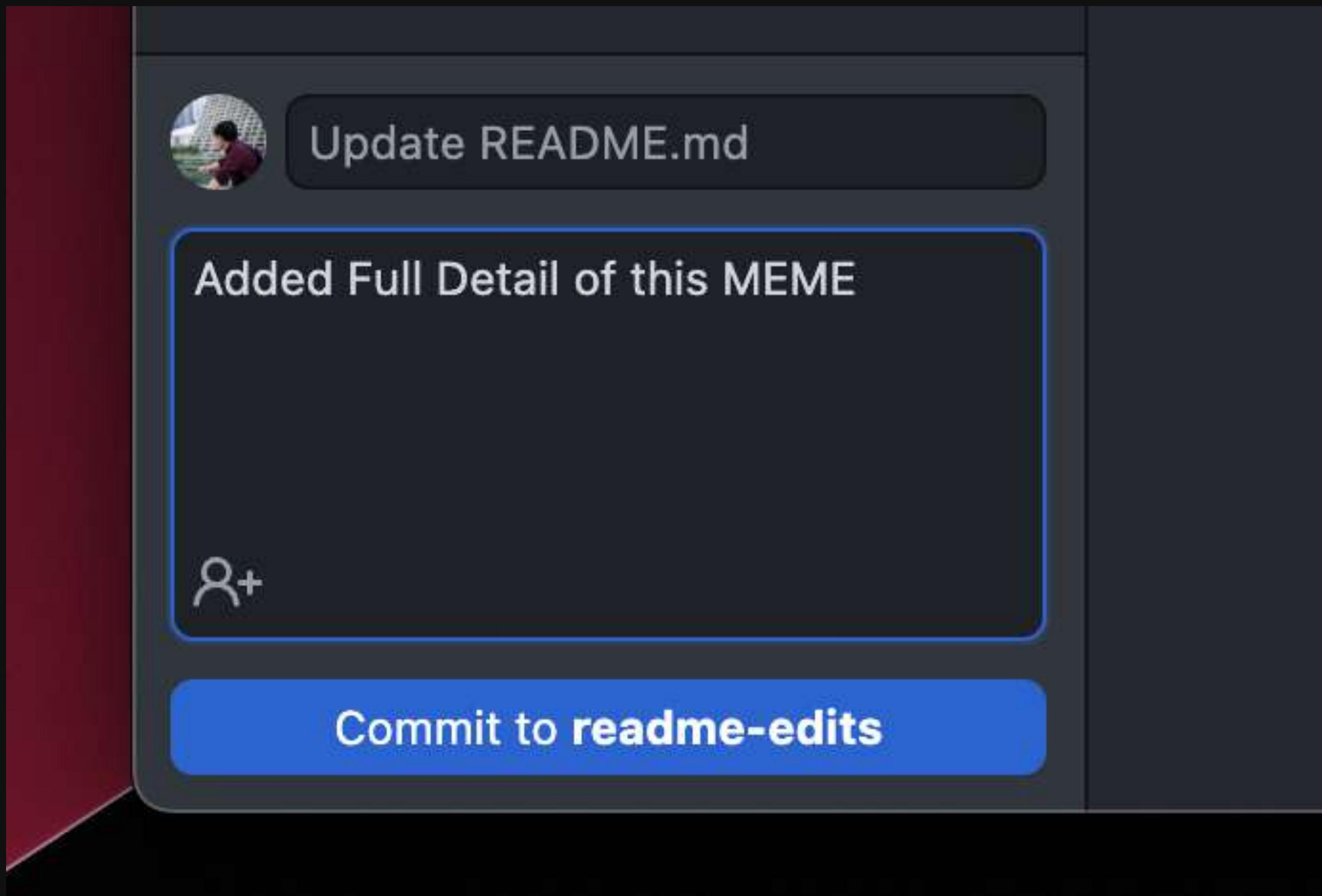
svIku



และใน VS Code จะเป็นกว่าโค้ดเราถูกแก้ไปแล้วด้วยนะ



ต่อมาให้เราระบุชื่อ Commit และ คำอธิบายไปว่าเราแก้ไข



ตรงปุ่ม Commit จะมีบอกว่าเราสร้างการเปลี่ยนแปลง



Search or jump to...

Pull requests Issues Marketplace Explore

BURNTO
DEV

🔒 PrameKittikorn / DevTips Private

👁️ U

Code Issues Pull requests Actions Projects Security Insights Settings

main ▾

1 branch

0 tags

Go to file

Add file ▾

Code ▾



PrameKittikorn Initial commit

74b9073 35 minutes ago 1 commit

README.md

Initial commit

35 minutes ago

README.md



DevTips

กิจกรรมการ ๆ ของการเดฟแบนทิพย์ๆ

หลังจากกดไปแล้ว ลองไปดูที่ Repository ของเรา

Search or jump to... / Pull requests Issues Marketplace Explore

PrameKittikorn / DevTips Private

Code Issues Pull requests Actions Projects Security Insights Settings

main ▾ 1 branch 0 tags Go to file Add file Code

PrameKittikorn Initial commit 74b9073

README.md Initial commit

README.md

DevTips

กิจกรรมการ ฯ ของการเดฟแบบทิพย์ๆ



ไม่เห็นเปลี่ยนเลยครับ W รี ๆ

Search or jump to... / Pull requests Issues Marketplace Explore

PrameKittikorn / DevTips Private

Code Issues Pull requests Actions Projects Security Insights Settings

main 1 branch 0 tags Go to file Add file Code

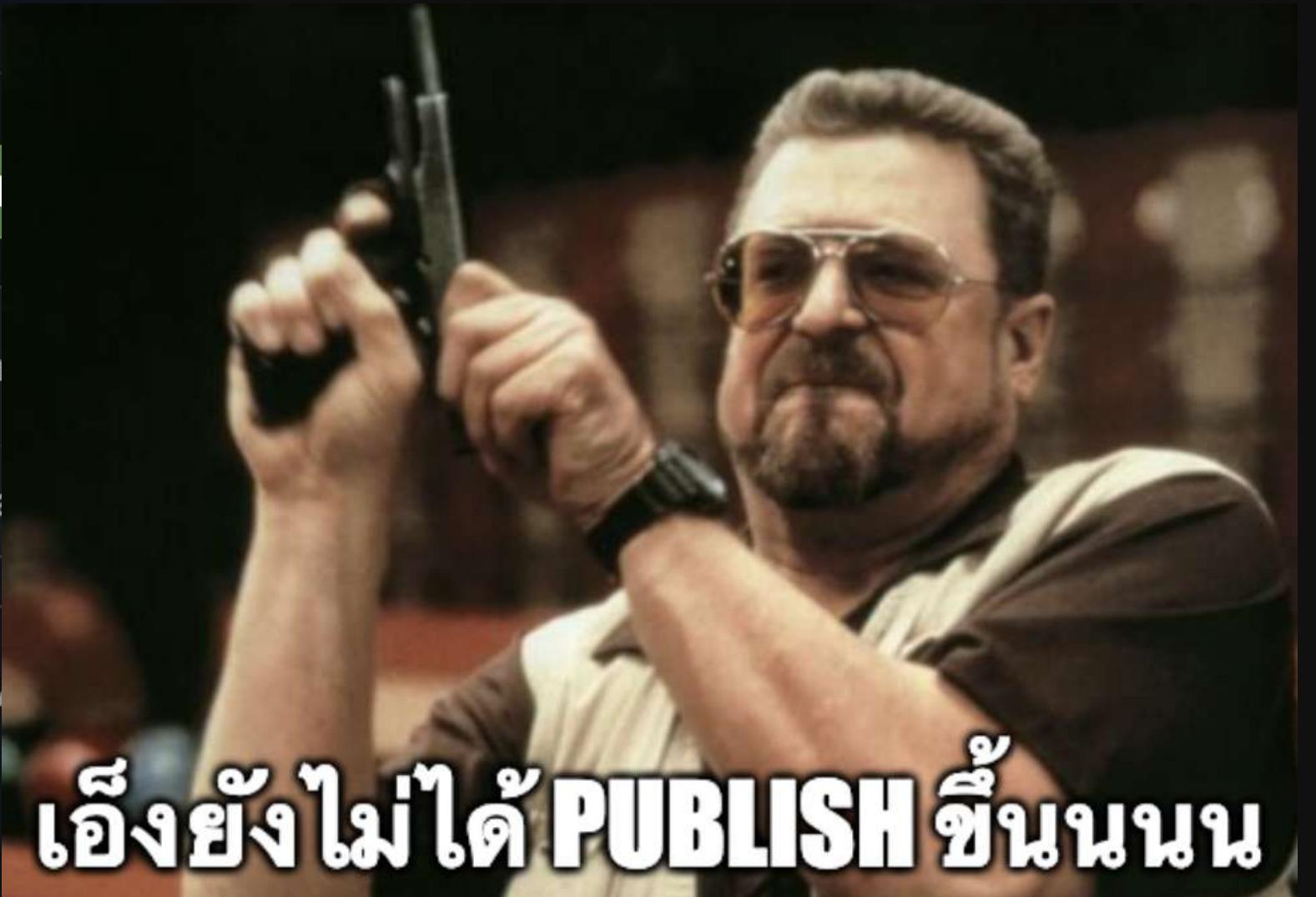
PrameKittikorn Initial commit 74b9073 35 minutes ago 1 commit

README.md Initial commit 35 minutes ago

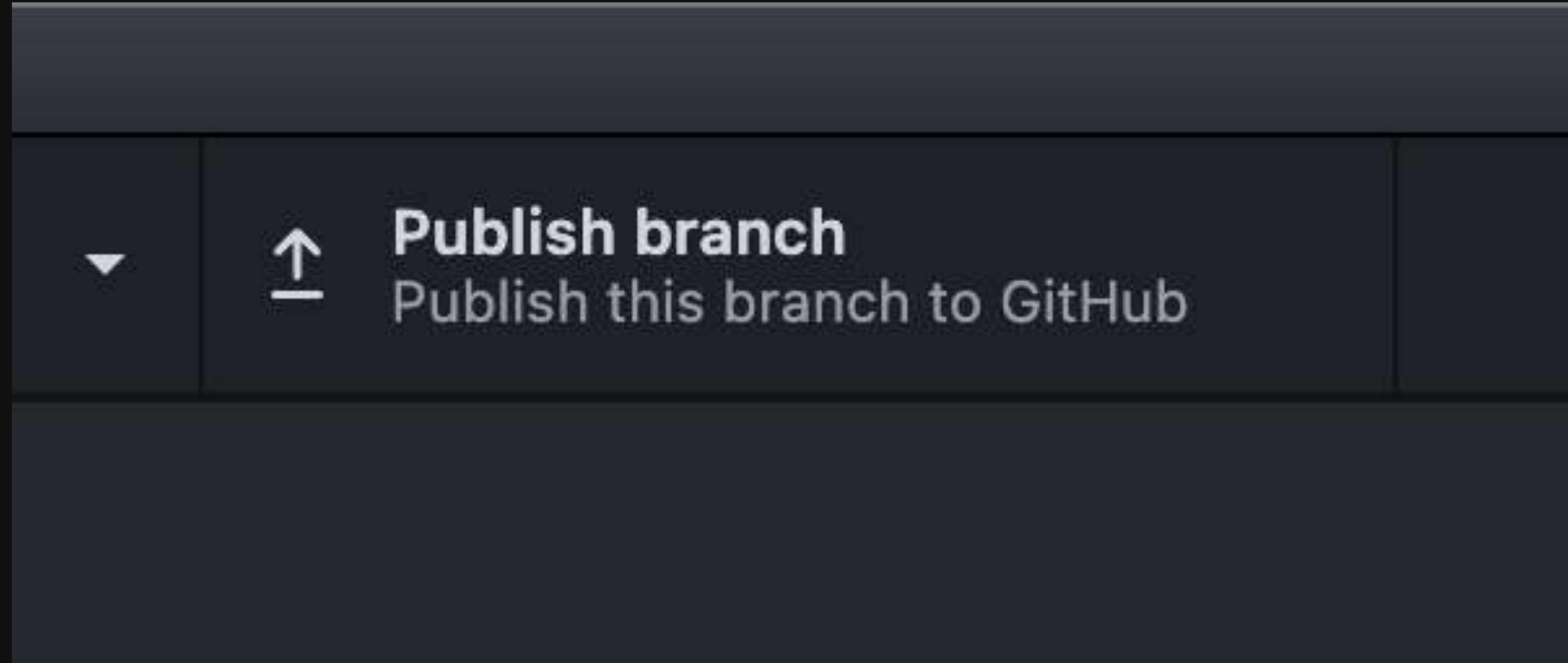
README.md

DevTips

กิจกรรมการ ๆ ของการเดฟแบบทิพย์ๆ

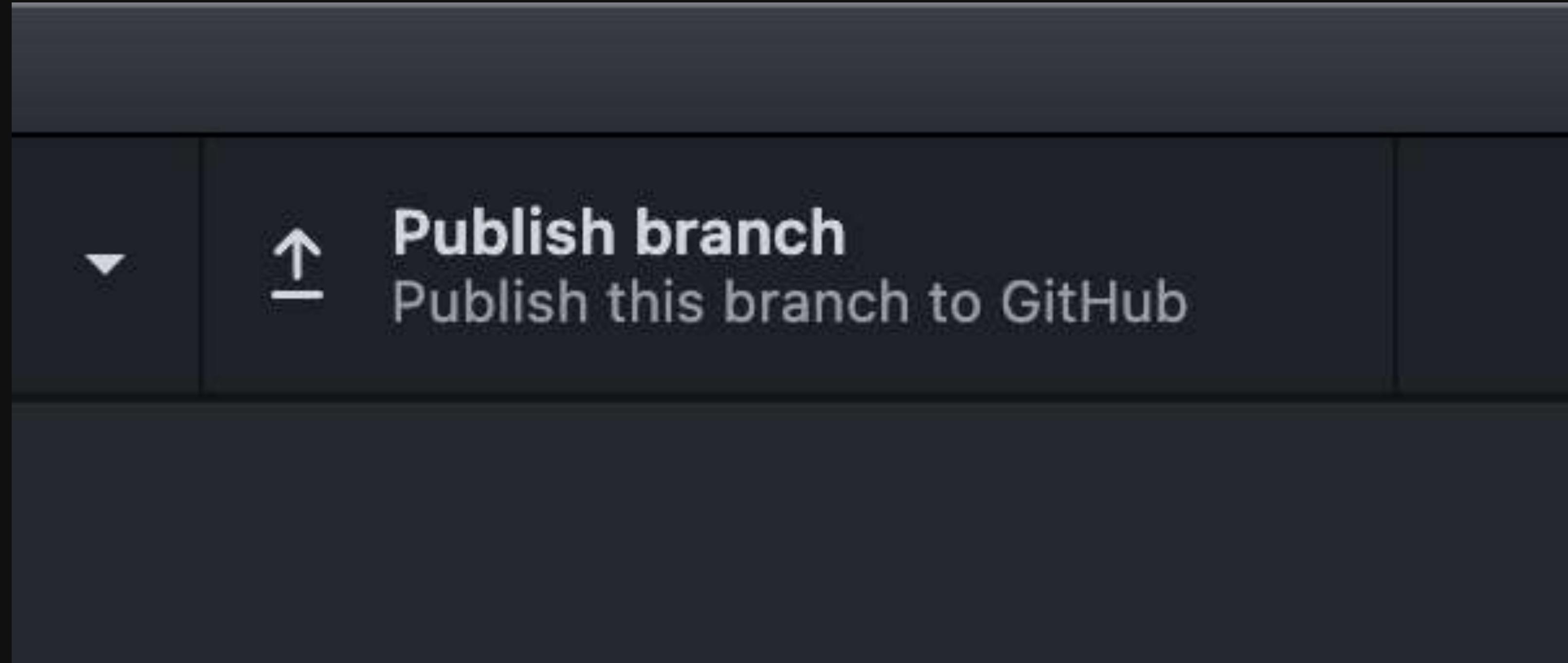


ครັບUUU



กดปุ่มนี้ใน GUI ก่อนนะครับ

“การสร้าง Commit
ก็เหมือนการสร้างจุดเชฟโรลีนเกม
ถ้าตายจะได้ย้อนกลับมาได้”



||| การ Publish ก็คือการส่งขึ้น GitHub นั่น|||

Search or jump to... / Pull requests Issues Marketplace Explore

Unwatch 1 Fork 0 Star 0

PrameKittikorn / DevTips Private

Code Issues Pull requests Actions Projects Security Insights Settings

readme-edits had recent pushes less than a minute ago Compare & pull request

main 1 branch 0 tags Go to file Add file Code

PrameKittikorn Initial commit 74b9073 41 minutes ago 1 commit

README.md Initial commit 41 minutes ago

README.md

DevTips

กิจกรรมก้าว ๆ ของการเดฟแบบทิพย์ๆ

About

กิจกรรมก้าว ๆ ของการเดฟแบบทิพย์ๆ

Readme 0 stars 1 watching 0 forks

Releases

No releases published Create a new release

Packages

No packages published Publish your first package

เมื่อคุณแล้วเราจะเห็นว่ามีแจ้งขึ้นมา

PrameKittikorn / DevTips (Private)

Unwatch 1 Fork 0 Star 0

Code Issues Pull requests Actions Projects Security Insights Settings

readme-edits had recent pushes less than a minute ago

Compare & pull request

main ▾ 1 branch 0 tags

Go to file Add file ▾ Code ▾

PrameKittikorn Initial commit 74b9073 41 minutes ago 1 commit

README.md Initial commit 41 minutes ago

README.md

DevTips

กิจกรรมการ ฯ ของ การเดฟแบบทิพย์ๆ

About

กิจกรรมการ ฯ ของ การเดฟแบบทิพย์ๆ

Readme 0 stars 1 watching 0 forks

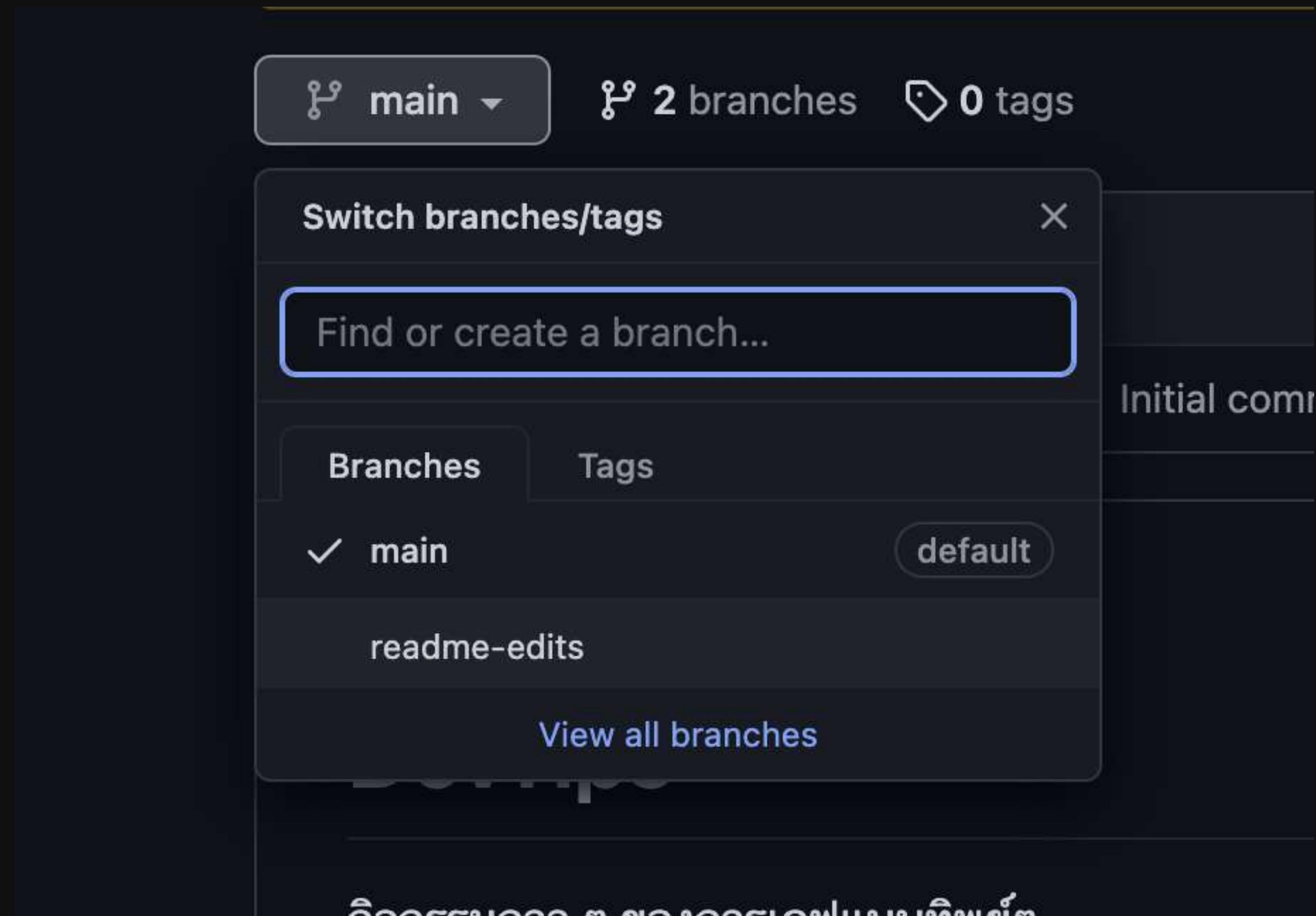
Releases

No releases published Create a new release

Packages

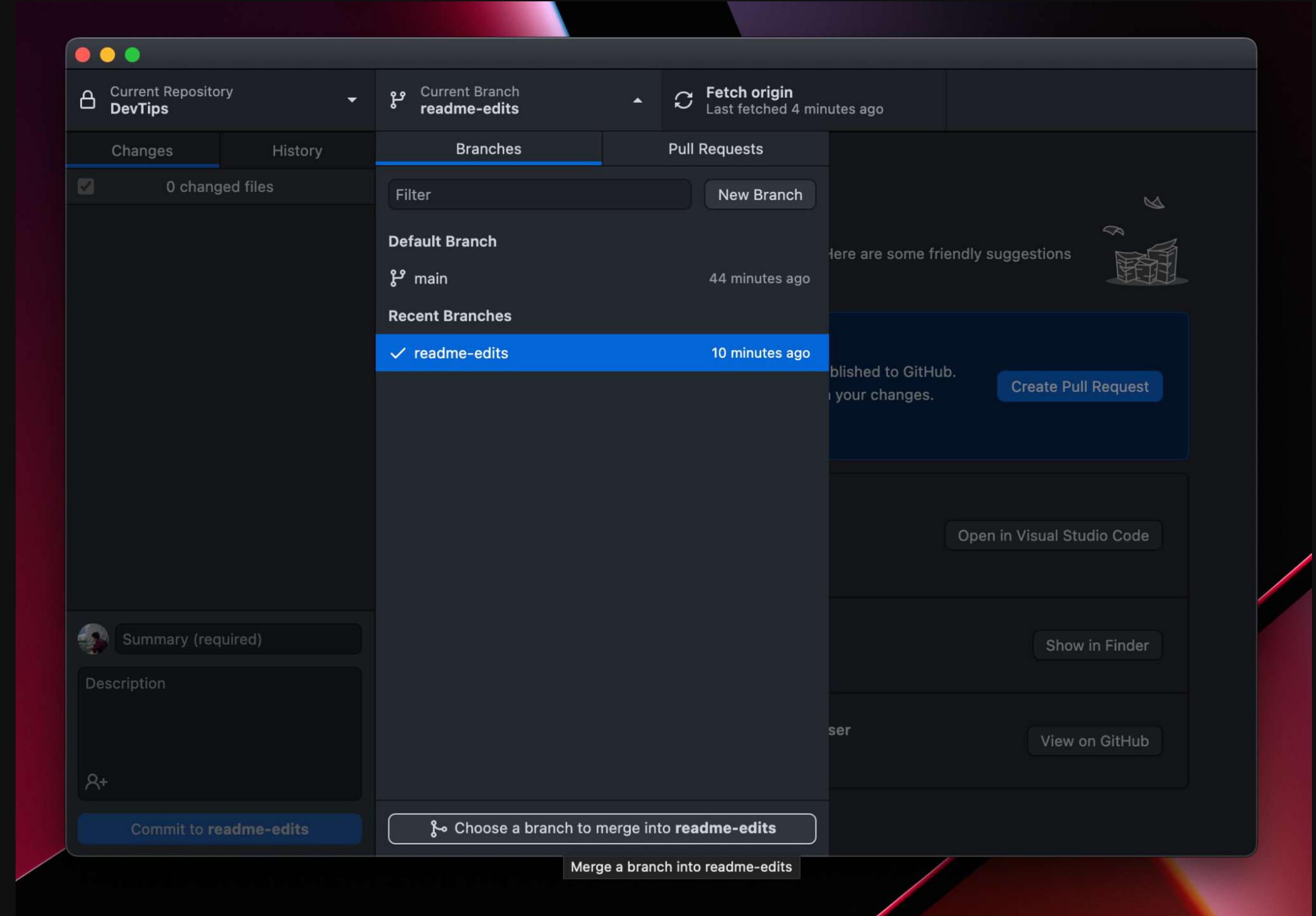
No packages published Publish your first package

เราจะปั้นบันราอยู่ใน Main เราเลยไม่เห็นการเปลี่ยนแปลง



คลิกไปที่ main เปลี่ยน branch เป็น readme-edit

The screenshot shows the GitHub repository page for 'PrameKittikorn / DevTips'. The repository is private. The 'Code' tab is selected. At the top, it shows 'readme-edits' (1 commit ahead of main), '2 branches', and '0 tags'. The commit history shows two commits from 'PrameKittikorn': 'Update README.md' (9 minutes ago) and 'Update README.md' (9 minutes ago). The repository details on the right include sections for 'About', 'Readme', 'Contributors', 'Releases', and 'Packages'.



เมื่อเราแก้ไขบอร์ดอยู่ต้องการจะรวมกับ Branch หลัก

Current Branch
main

Fetch origin
Last fetched 5 minutes ago

tory

Branches

Pull Requests

Filter

New Branch

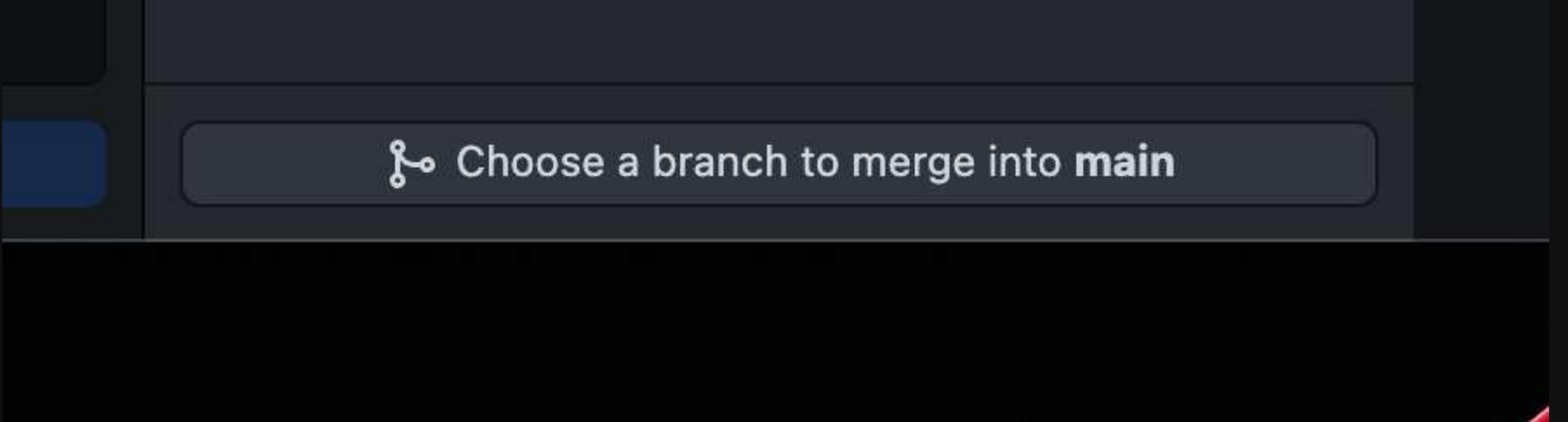
Default Branch

✓ main

1 hour ago

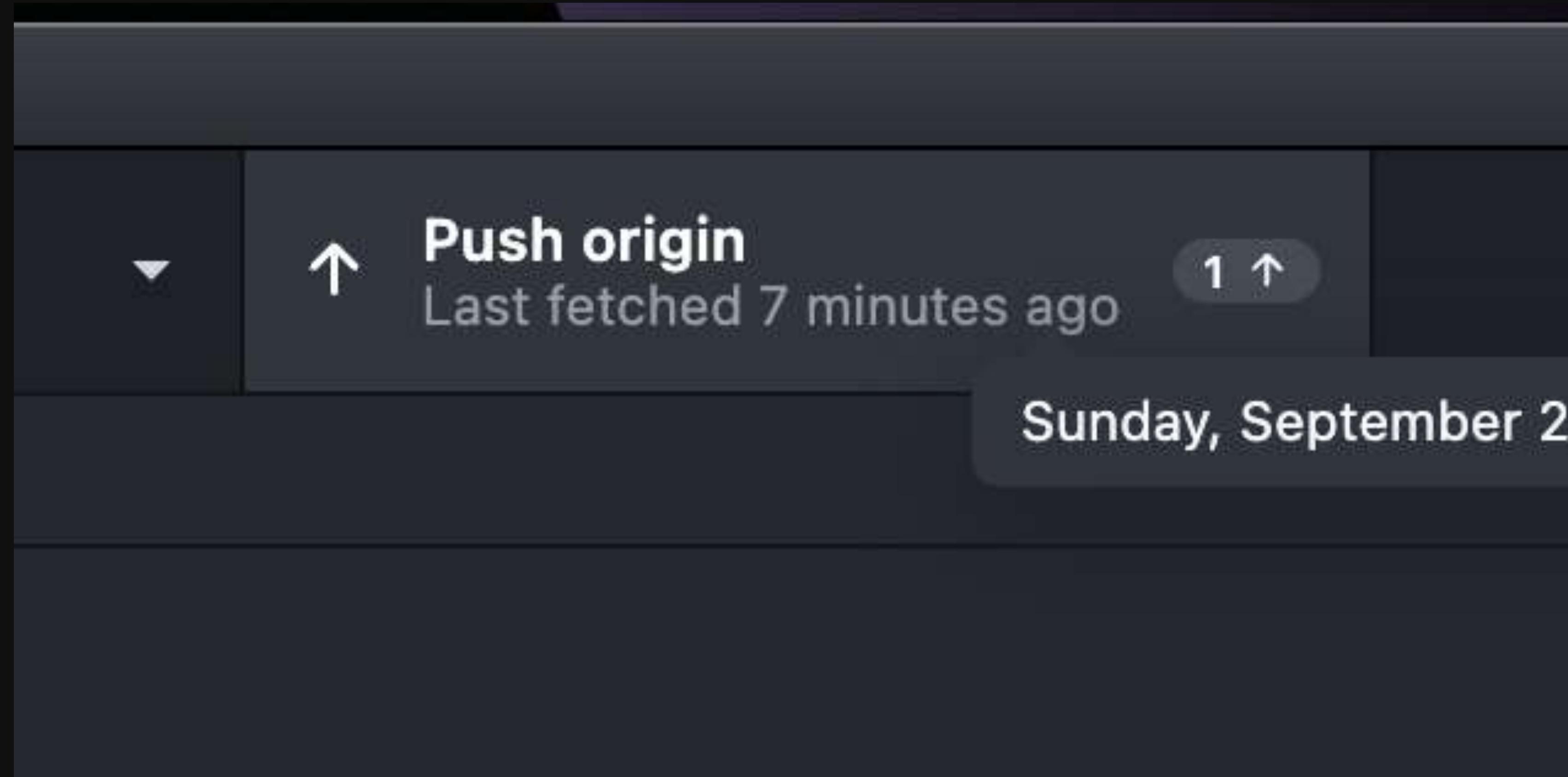
Recent Branches

Step 1 เลือก Branch ක้ากที่ต้องการ Merge



✎ Choose a branch to merge into **main**

Step 2 กดปุ่มนี้เพื่อ Merge



Step 4 Publish ឯកសារ

[Code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Security](#) [Insights](#) [Settings](#)[main](#)

2 branches

0 tags

[Go to file](#)[Add file](#)[Code](#)[About](#)

PrameKittikorn Update README.md ...

173103f 13 minutes ago 2 commits

[README.md](#)

Update README.md

13 minutes ago

[README.md](#)

DevTips

กิจกรรมการ ๆ ของการเดฟแบบทิพ ๆ จาก เพจมีมสีเหลือง ๆ ที่มีความรู้เขียนโปรแกรมแทรกเข้าไปบ้าง

กิจกรรมการ ๆ ของการเดฟแบบทิพ

[Readme](#)[0 stars](#)[1 watching](#)[0 forks](#)

Releases

No releases published

[Create a new release](#)

Packages

No packages published

[Publish your first package](#)

แค่บี้ก็จะขึ้นไปอยู่บน main แล้วนั่นเอง

[Code](#)[Issues](#)[Pull requests](#)[Actions](#)[Projects](#)[Security](#)[Insights](#)[Settings](#)[main](#)

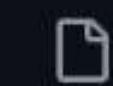
2 branches

0 tags

[Go to file](#)[Add file](#)[Code](#)[About](#)

PrameKittikorn Update README.md ...

173103f 13 minutes ago 2 commits



README.md

Update README.md

13 minutes ago

README.md



DevTips

กิจกรรมการ ๆ ของการเดฟแบบทิพ ๆ จาก เพจมีมสีเหลือง ๆ ที่มีความรู้เขียนโปรแกรมแทรกเข้าไปบ้าง

step ต่อไปหลังจากอยู่ใน main และ

กิจกรรมการ ๆ ของการเดฟแบบทิพ

Readme

0 stars

1 watching

0 forks

Releases

No releases published

[Create a new release](#)

Packages

No packages published

[Publish your first package](#)



กี凸显物



Tips for Newbie Dev



GitLens — Git supercharged v12.2

GitKraken | 17,375,910 | ★★★★★ (611)

Supercharge Git within VS Code — Visualize code author...

[Install](#) | [View on GitHub](#) 

[Details](#) [Feature Contributions](#) [Changelog](#)

VS Marketplace | v2022.8.3105 | installs 17.38M

downloads 114.18M | rating 4.28/5 (611)

 Live Share enabled  gitkraken-community  gitlens

Categories

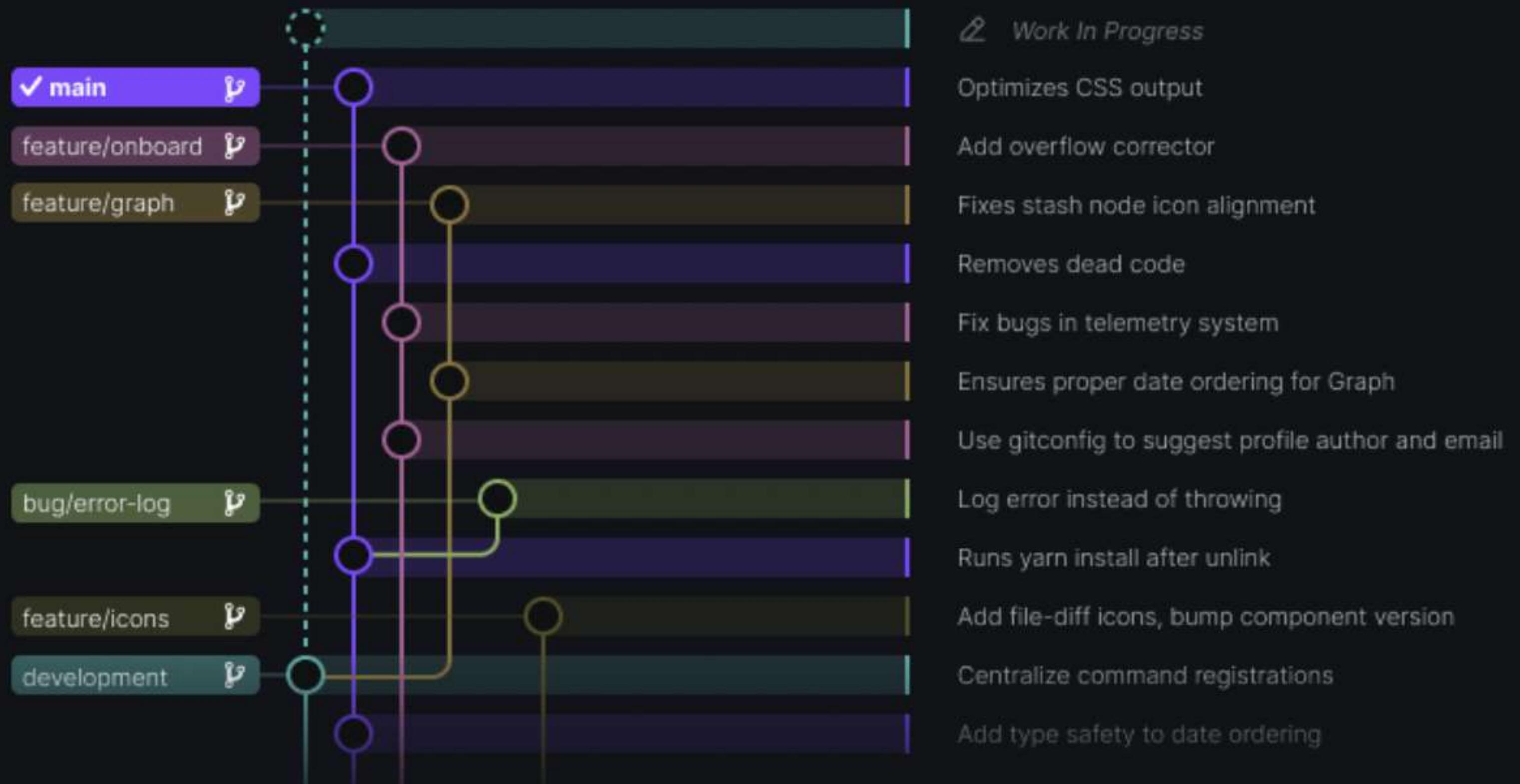
SCM Providers

Extension Resources

[Marketplace](#)
[Repository](#)
[License](#)
[GitKraken](#)

เครื่องมือพิเศษที่ดีมาก ๆ กกก

Commit Graph



The *Commit Graph* helps you to easily visualize branch structure and commit history. Not only does it help you verify your changes, but also easily see changes made by others and when. Selecting a row within the graph will open in-depth information about a commit or stash in the new [Commit Details view](#).

Visual File History view



The *Visual File History* view allows you to quickly see the evolution of a file, including when changes were made, how large they were, and who made them.

Authors who have contributed changes to the file are on the left y-axis to create a swim-lane of their commits over time (the x-axis). Commit are plotted as color-coded (per-author) bubbles, whose size represents the relative magnitude of the changes.

Additionally, each commit's additions and deletions are visualized as color-coded, stacked, vertical bars, whose height represents the number of affected lines (right y-axis). Added lines are shown in green, while deleted lines are red.

```
> main ⚡ origin/main
> feature/before-graph-refactor
> feature/remote-avatar ⚠️ origin/feature/remote-avatar
> pr/airaketa/1937 11↑ 1↓ ⚡ github-desktop-airaketa/feature/i18n
    < Uncommitted Changes
        ± yarn.lock
        ± readme.md
        ± index.rb
    > 🛡 #1937: Closes #577 i18n support Open, 12 hours ago
    > ↑ < pr/airaketa/1937 > ➜ Closes #577 - adds i18n support airaketa, last month
        ⚡ Removes unused styles from the graph Keith Daulton, 2 days ago
        ⚡ Changes preview banner to use an "eye" icon You, 2 days ago
        ⚡ Fixes missing line breaks in hovers You, 2 days ago
        ⚡ Updates commit graph preview bannern You, 2 days ago
```

Worktrees allow you to easily work on different branches of a repository simultaneously. You can create multiple working trees, each of which can be opened in individual windows or all together in a single workspace.

```
TS code.ts X
TS code.ts > ⚡ gitLens
1 // unstaged, uncommitted change
2 // staged, uncommitted change
3
4
5 function supercharged(code: string) {
6   return `supercharged ${code}`;
7 }
8
9
10
11
12
13
14
15 function gitLens(code: string) {
16   return supercharged(code);      You, 4 years ago • Supercharged
17 }
18
19
20
21
```

Revision Navigation

- Adds an *Open Changes with Previous Revision* command (`gitlens.diffWithPrevious`) to compare the current file or revision with the previous commit revision
- Adds an *Open Changes with Next Revision* command (`gitlens.diffWithNext`) to compare the current file or revision with the next commit revision
- Adds an *Open Line Changes with Previous Revision* command (`gitlens.diffLineWithPrevious`) to compare the current file or revision with the previous line commit revision
- Adds an *Open Changes with Working File* command (`gitlens.diffWithWorking`) to compare the current revision or most recent commit revision of the current file with the working tree
- Adds an *Open Line Changes with Working File* command (`gitlens.diffLineWithWorking`) to compare the commit revision of the current line with the working tree
- Adds an *Open Changes with Branch or Tag...* command (`gitlens.diffWithRevisionFrom`) to compare the current file or revision with another revision of the same file on the selected reference
- Adds an *Open Changes with Revision...* command (`gitlens.diffWithRevision`) to compare the current file or revision with another revision of the same file

Current Line Blame

```
function gitLens(code: string) {  
  return supercharged(code);}      You, 4 years ago • Supercharged
```

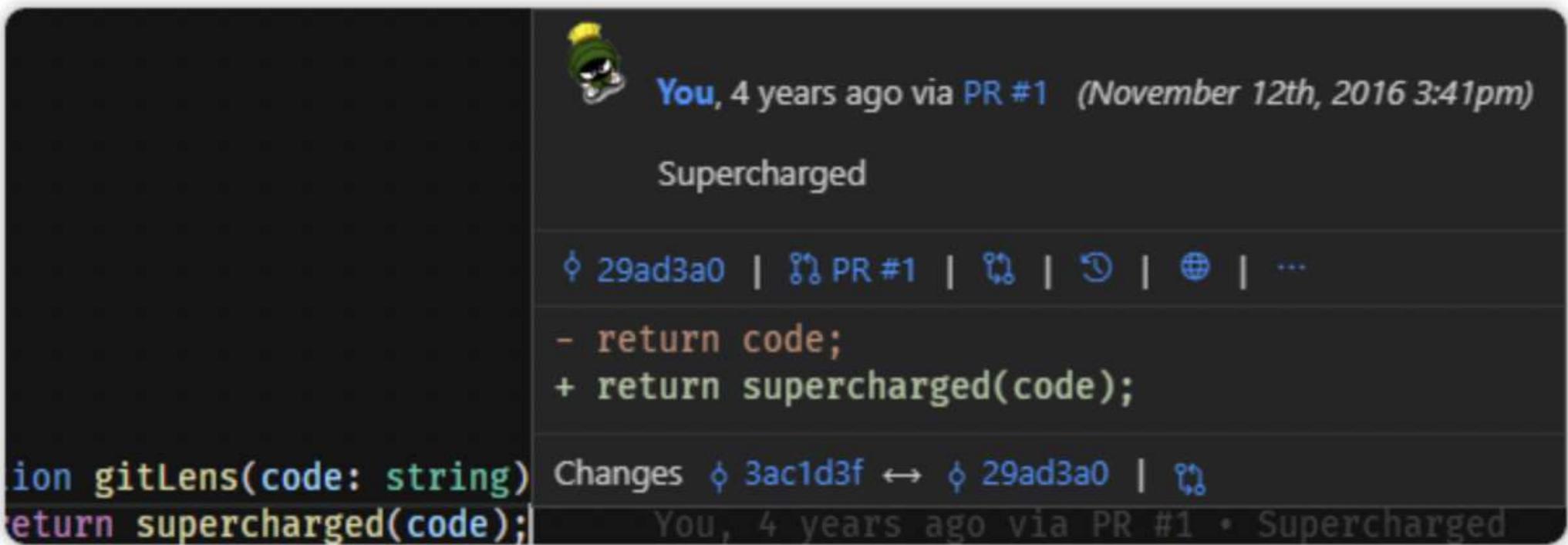
- Adds an unobtrusive, [customizable](#), and [themable](#), **blame annotation** at the end of the current line
 - Contains the author, date, and message of the current line's most recent commit (by [default](#))
 - Adds a *Toggle Line Blame* command (`gitlens.toggleLineBlame`) to toggle the blame annotation on and off

Git CodeLens

```
Eric Amodio, 3 minutes ago | 1 author (Eric Amodio)
1
Eric Amodio, 3 minutes ago | 1 author (Eric Amodio)
2 export namespace GitLens {
  Eric Amodio, 3 minutes ago | 1 author (Eric Amodio)
3   export function gitLens(code: string) {
  4     return supercharged(code);
  5   }
  6 }
```

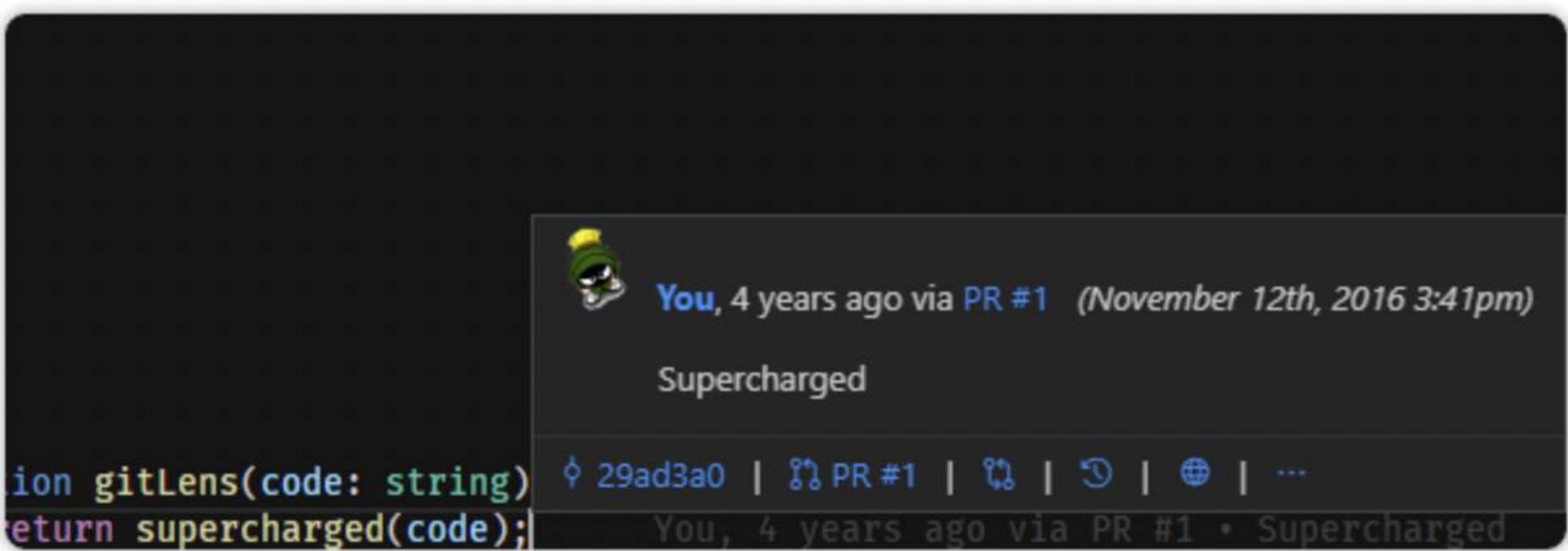
- Adds Git authorship **CodeLens** to the top of the file and on code blocks ([optional](#), on by default)
 - **Recent Change** — author and date of the most recent commit for the file or code block
 - Click the CodeLens to show a **commit file details quick pick menu** with commands for comparing, navigating and exploring commits, and more ([by default](#))
 - **Authors** — number of authors of the file or code block and the most prominent author (if there is more than one)
 - Click the CodeLens to toggle the file Git blame annotations on and off of the whole file ([by default](#))
 - Will be hidden if the author of the most recent commit is also the only author of the file or block, to avoid duplicate information and reduce visual noise
 - Provides [customizable](#) click behavior for each CodeLens — choose between one of the following
 - Toggle file blame annotations on and off
 - Compare the commit with the previous commit
 - Show a quick pick menu with details and commands for the commit
 - Show a quick pick menu with file details and commands for the commit
 - Show a quick pick menu with the commit history of the file
 - Show a quick pick menu with the commit history of the current branch
- Adds a *Toggle Git CodeLens* command (`gitlens.toggleCodeLens`) with a shortcut of `shift+alt+b` to toggle the CodeLens on and off

Current Line Hovers



- Adds customizable Git blame hovers accessible over the current line

Details Hover



- Adds a details hover annotation to the current line to show more commit details (optional, on by default)
 - Provides automatic issue linking to Bitbucket, Gerrit, GoogleSource, Gitea, GitHub, GitLab, and Azure DevOps in commit messages
 - Provides a quick-access command bar with *Open Changes*, *Blame Previous Revision*, *Open on Remote*, *Invite to Live Share* (if available), and *Show More Actions* command buttons
 - Click the commit SHA to execute the *Show Commit* command

Changes (diff) Hover

A screenshot of a code editor showing a 'Changes (diff) Hover' annotation. The annotation is a dark gray box with rounded corners, containing the following text:

```
- return code;  
+ return supercharged(code);  
  
ion gitLens(code: string) Changes ↗ 3ac1d3f ↔ ↗ 29ad3a0 | ⚡  
return supercharged(code); You, 4 years ago via PR #1 • Supercharged
```

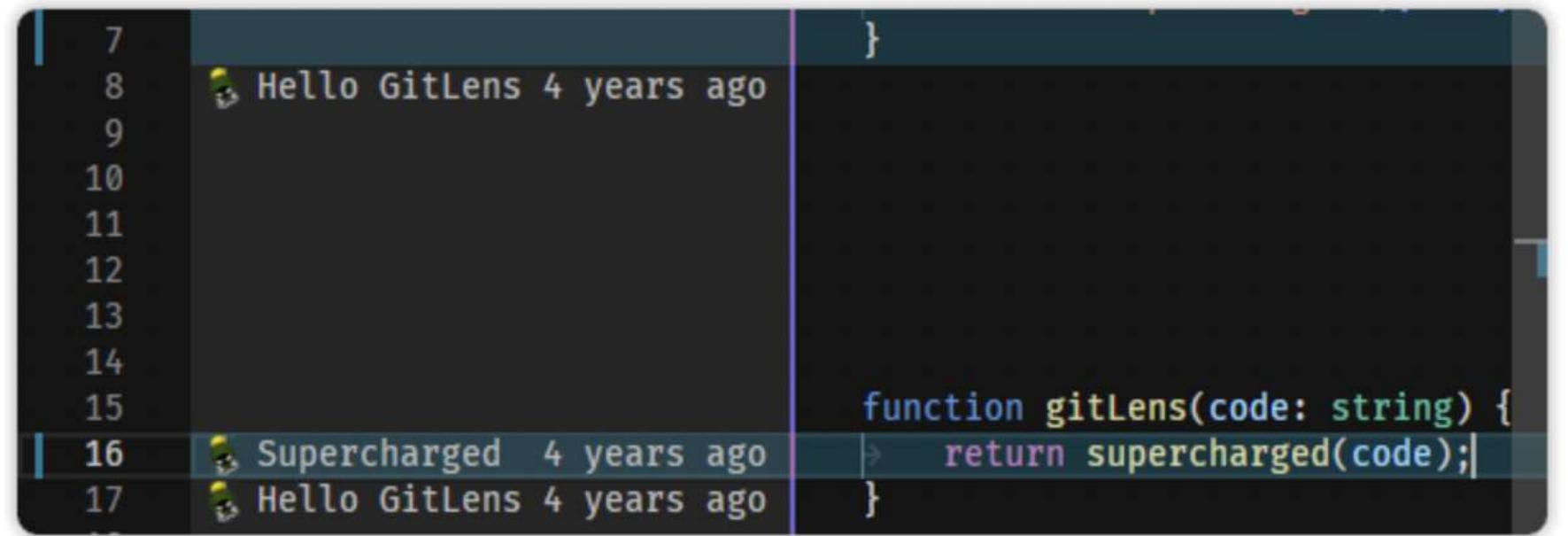
- Adds a **changes (diff)** hover annotation to the current line to show the line's previous version ([optional](#), on by default)
 - Click the **Changes** to execute the *Open Changes* command
 - Click the current and previous commit SHAs to execute the *Show Commit* command

Annotation Hovers

A screenshot of a code editor showing an 'Annotation Hovers' Git blame annotation. The annotation is a dark gray box with rounded corners, containing the following information:
You, 4 years ago via PR #1 (November 12th, 2016 3:41pm)
Supercharged
↳ 29ad3a0 | ↳ PR #1 | ⚡ | ⌂ | ⌂ | ...
- return code;
+ return supercharged(code);
Changes ↗ 3ac1d3f ↔ ↗ 29ad3a0 | ⚡
return supercharged(code); You, 4 years ago via PR #1 • Supercharged

- Adds [customizable](#) Git blame hovers accessible when annotating

File Blame



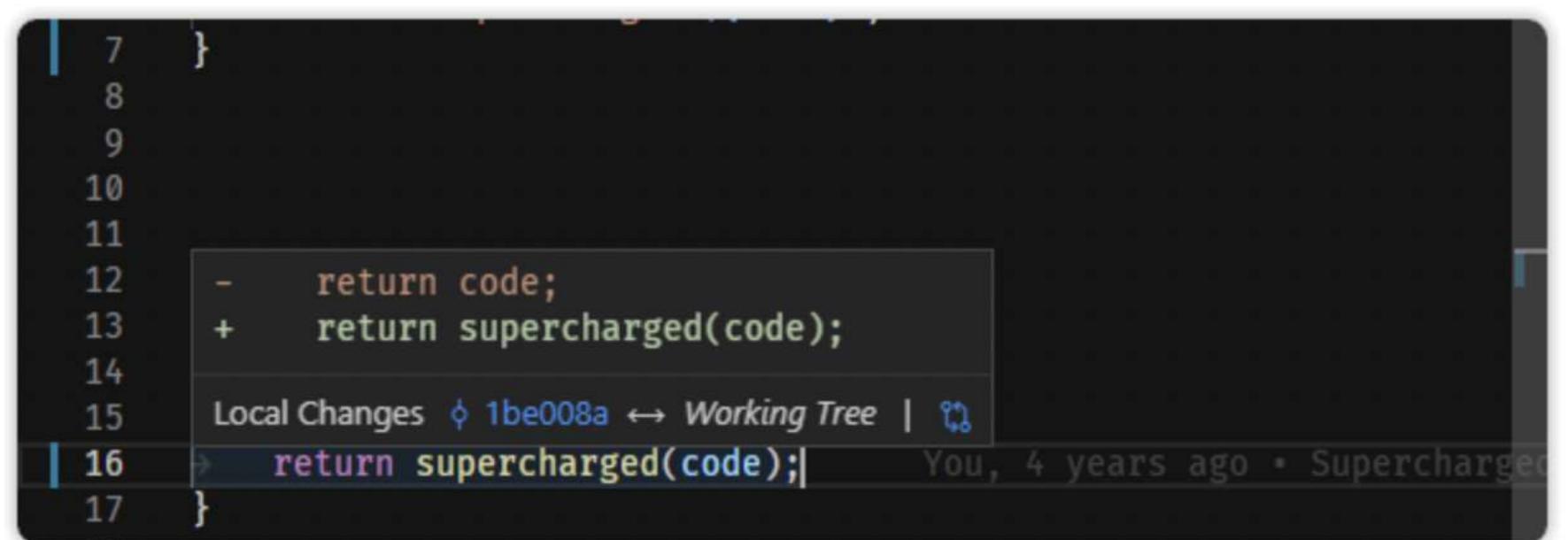
A screenshot of a code editor showing a file blame annotation. The code is as follows:

```
7 }  
8 Hello GitLens 4 years ago }  
9  
10  
11  
12  
13  
14  
15 function gitLens(code: string) {  
16 Supercharged 4 years ago ↗ return supercharged(code);  
17 Hello GitLens 4 years ago }
```

The line at index 16, "Supercharged 4 years ago ↗ return supercharged(code);", has a tooltip displayed above it, containing the commit message "Supercharged" and the date "4 years ago".

- Adds on-demand, [customizable](#), and [themable](#), **file blame annotations** to show the commit and author who last modified each line of a file
 - Contains the commit message and date, by [default](#)
 - Adds a **heatmap** (age) indicator on right edge (by [default](#)) of the file to provide an easy, at-a-glance way to tell how recently lines were changed ([optional](#), on by default)
 - See the [file heatmap](#) section below for more details
 - Adds a *Toggle File Blame* command (`gitlens.toggleFileBlame`) with a shortcut of `alt+b` to toggle the blame annotations on and off
 - Press `Escape` to turn off the annotations

File Changes



A screenshot of a code editor showing file changes annotations. The code is as follows:

```
7 }  
8  
9  
10  
11  
12 - return code;  
13 + return supercharged(code);  
14  
15 Local Changes ⚡ 1be008a ↔ Working Tree | ↗  
16 ↗ return supercharged(code); You, 4 years ago • Supercharged  
17 }
```

The line at index 13, "+ return supercharged(code);", has a tooltip displayed above it, containing the commit message "Supercharged" and the date "4 years ago".

- Adds an on-demand, [customizable](#) and [themable](#), **file changes annotation** to highlight any local (unpublished) changes or lines changed by the most recent commit
 - Adds *Toggle File Changes* command (`gitlens.toggleFileChanges`) to toggle the changes annotations on and off
 - Press `Escape` to turn off the annotations

Commit Details View

▼ COMMIT DETAILS



Eric Amodio
committed 3 weeks ago

🕒 ⚡ 0300619 ⚡ :

Closes #1987 uncommitted changes annotation format

▼ AUTOLINKS 1 found

⌚ Don't show line blame for uncommitted lines
1987 closed 3 weeks ago

▼ FILES CHANGED +0 ~9 -0

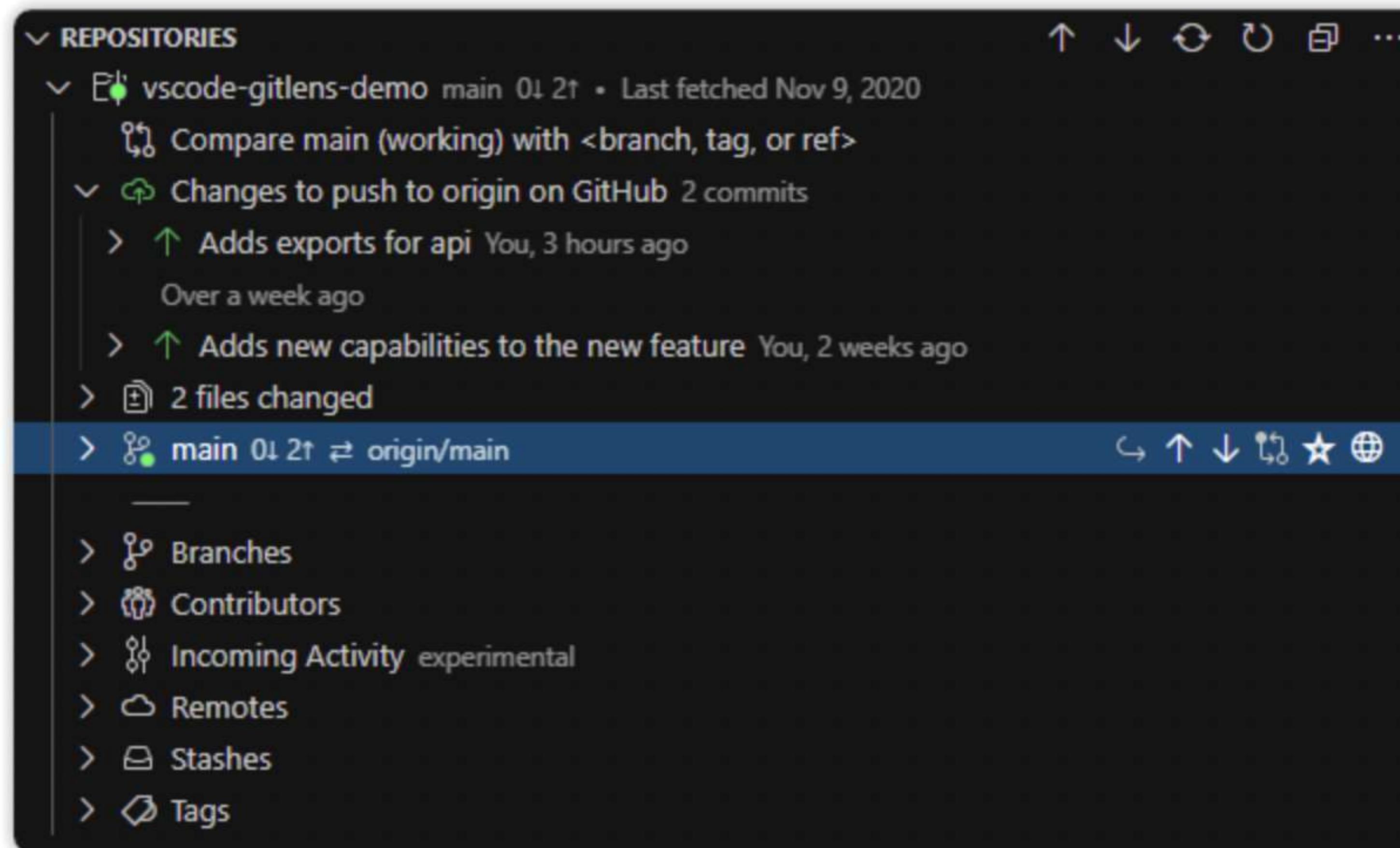
- ✚ CHANGELOG.md
- ✚ README.md
- ✚ package.json
- ✚ lineAnnotationController.ts src/annotations
- ✚ config.ts src
- ✚ current-line.html src/webviews/apps/settings/partials
- ✚ appWithConfigBase.ts src/webviews/apps/shared
- ✚ protocol.ts src/webviews
- ✚ webviewWithConfigBase.ts src/webviews

Commits View

The screenshot shows the GitLens extension's commits view within the Visual Studio Code interface. At the top, there is a header bar with icons for navigating between branches, committing changes, and other repository operations. Below this, a main list displays commit history from a GitHub repository. The commits are color-coded by author and staged status:

- Commits for branch awesome-feature:**
 - Compare awesome-feature (working) with <branch, tag, or ref>
 - #2: Adds an awesome new feature Open, 4 days ago
 - Up to date with origin on GitHub Last fetched 5 minutes ago
- Commits for branch origin:**
 - #2: Adds an awesome new feature You, 2 weeks ago
 - common.ts awesome/common
 - feature.ts awesome
 - web.ts awesome/web
 - (origin/main) Refactors the new feature to improve performance You, 2 weeks ago
 - Fixes off-by-one in the new feature You, 2 weeks ago
 - Adds a new feature You, 2 weeks ago
 - Supercharged You, 4 years ago
 - Hello GitLens You, 4 years ago

Repositories View





GitHub Actions



GitHub Actions

Automate your workflow from idea to production

GitHub Actions makes it easy to automate all your software workflows, now with world-class CI/CD. Build, test, and deploy your code right from GitHub. Make code reviews, branch management, and issue triaging work the way you want.

Get started with Actions >

Questions? **Contact Sales >**



Run a workflow on any GitHub event

Kick off workflows with GitHub events like push, issue creation, or a new release. Combine and configure actions for the services you use, built and maintained by the community.

Whether you want to build a container, deploy a web service, or automate welcoming new users to your open source projects—there's an action for that. Pair GitHub Packages with Actions to simplify package management, including version updates, fast distribution with our global CDN, and dependency resolution, using your existing GITHUB_TOKEN.

on: pull_request_comment

ne on: public

on: page_build

on: watch

check_suite

on: scheduled

on: project

ent

on: check_run

on: deploym

on: release

on: re

on: repository_dispatch

on: issue_co

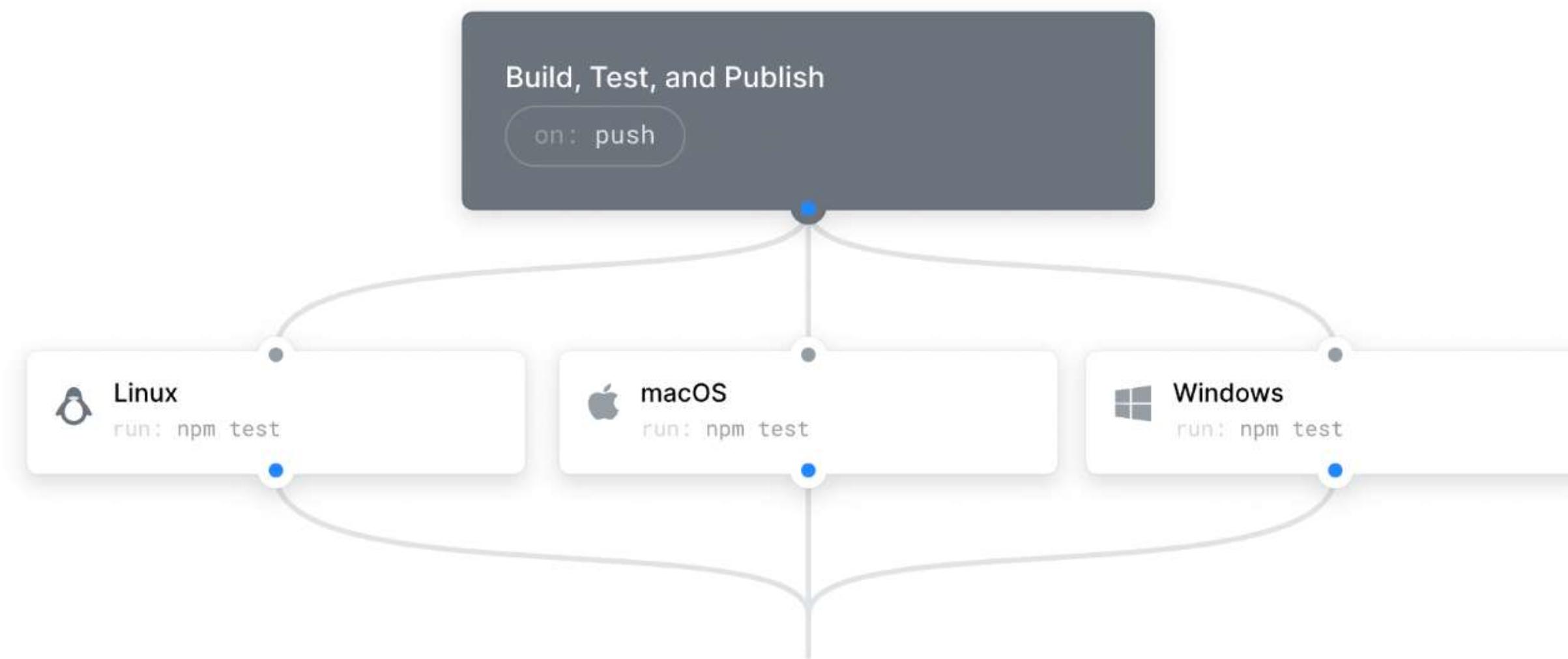
on: pull_request

on: delete

on: pull_request_rev

on: pul

or



Linux, macOS, Windows, ARM, and containers

Hosted runners for every major OS make it easy to build and test all your projects. Run directly on a VM or inside a container. Use your own VMs, in the cloud or on-prem, with self-hosted runners.



Matrix builds

Save time with matrix workflows that simultaneously test across multiple operating systems and versions of your runtime.



Any language

GitHub Actions supports Node.js, Python, Java, Ruby, PHP, Go, Rust, .NET, and more. Build, test, and deploy applications in your language of choice.

```
  ✓ should respond user repos json
  ✓ should 404 with unknown user

when requesting an invalid route
  ✓ should respond with 404 json

1123 passing (4s)

=====
Writing coverage object [/home/runner/build/coverage.json]
Writing coverage reports at [/home/runner/build/coverage]

=====
Coverage summary
Statements : 98.81% (1916/1939), 38 ignored
Branches   : 94.58% (751/794), 22 ignored
Functions   : 100% (267/267)
Lines      : 100% (1872/1872)

The command "npm run test-ci" exited with 0.

$ npm run lint

> express@4.17.1 lint /home/runner/build/express
> eslint .

The command "npm run lint" exited with 0.

store build cache

$ # Upload coverage to coveralls

Done. Your build exited with 0.
```

All checks have passed
4 successful checks

✓ **build** Successfully in 59s — build

✓ **test** Successfully in 59s — build

✓ **publish** Successfully in 59s — build

This branch has no conflicts with the base branch
Merging can be performed automatically.

Merge pull request ▾ You can also [open this in GitHub Desktop](#) or view [command line instructions](#).



Live logs

See your workflow run in realtime with [color and emoji](#). It's one click to copy a link that highlights a specific line number to share a CI/CD failure.



Built in secret store

Automate your software development practices with workflow files embracing the Git flow by codifying it in your repository.



Multi-container testing

Test your web service and its DB in your workflow by simply adding some docker-compose to your workflow file.

ci.yml

```
1  on: push
2  jobs:
3    test:
4      strategy:
5        matrix:
6          platform: [ubuntu-latest, macos-latest, windows-latest]
7          runs-on: ${{ matrix.platform }}
8          steps:
9            - uses: actions/checkout@v3
10           - uses: actions/setup-node@v3
11             with:
12               node-version: 16
13             - run: npm install-ci-test
14             - uses:
```

ernetes



any Kubernetes

Code Climate Velocity

In-depth code metrics to streamline your engineering processes

[codeclimate/velocity-deploy-action](#)

Mark stale issues and pull ...

Automatically label and close stale issues and pull requests

[actions/stale](#)

```
27  publish:
28    needs: [test]
29    steps:
30      - uses: actions/checkout@v3
```

Community-powered workflows

GitHub Actions connects all of your tools to automate every step of your development workflow. Easily deploy to any cloud, create tickets in Jira, or publish a package to npm.

Want to venture off the beaten path? Use the millions of open source libraries available on GitHub to create your own actions. Write them in JavaScript or create a container action—both can interact with the full GitHub API and any other public API.

Coveralls

Track your test coverage metrics

[coverallsapp/github-action](#)

Glo Boards

Integrate your Glo boards into your code workflow

[Axosoft/glo-actions](#)

Mabl

Integrate cross-browser testing into your GitHub Actions workflow

[mablhq/github-mabl-actions](#)

Label a pull request

Label pull requests based on changed files

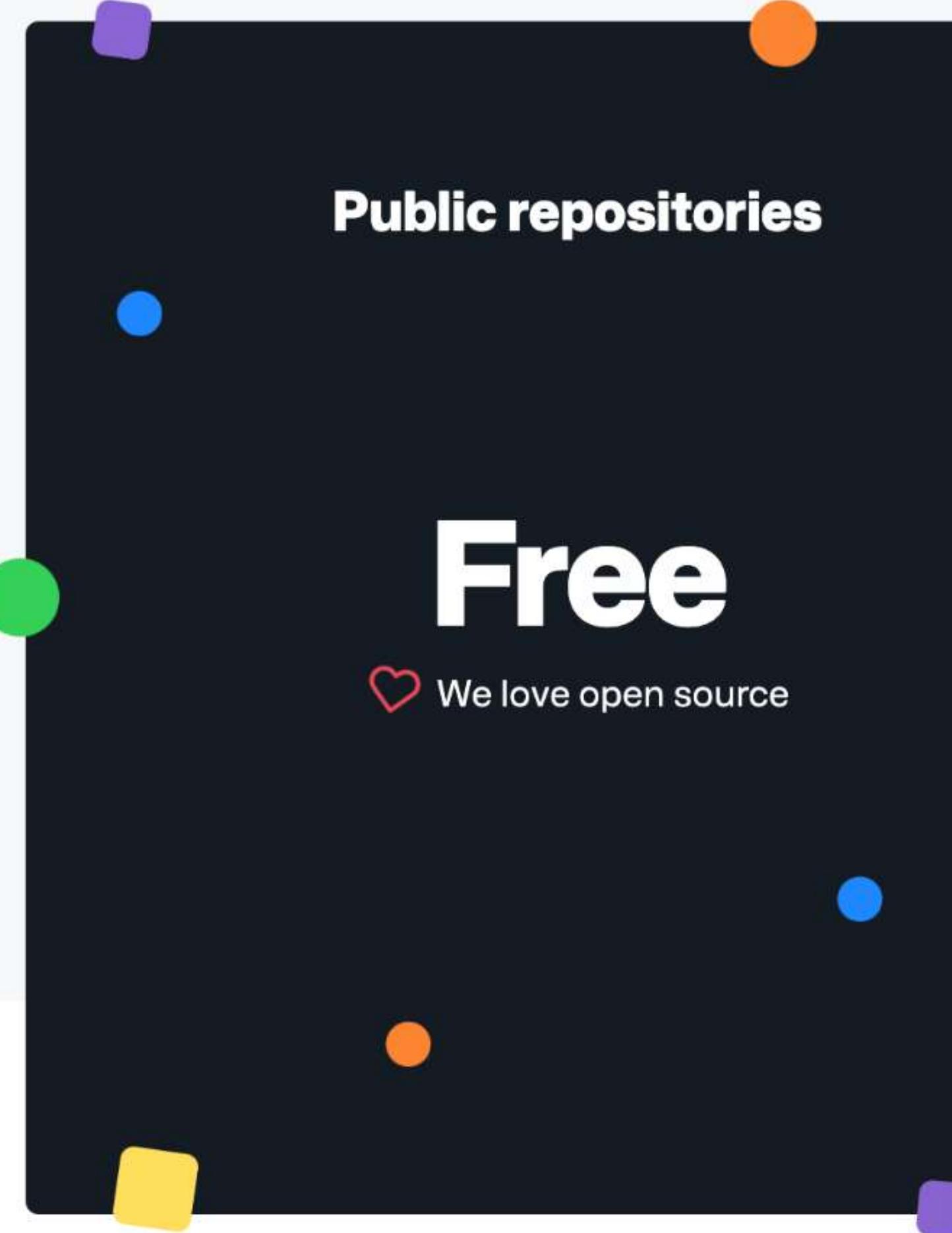
[actions/labeler](#)

Deploy to

Deploy your code to Zeit

[actions/deploy-to-zeit](#)

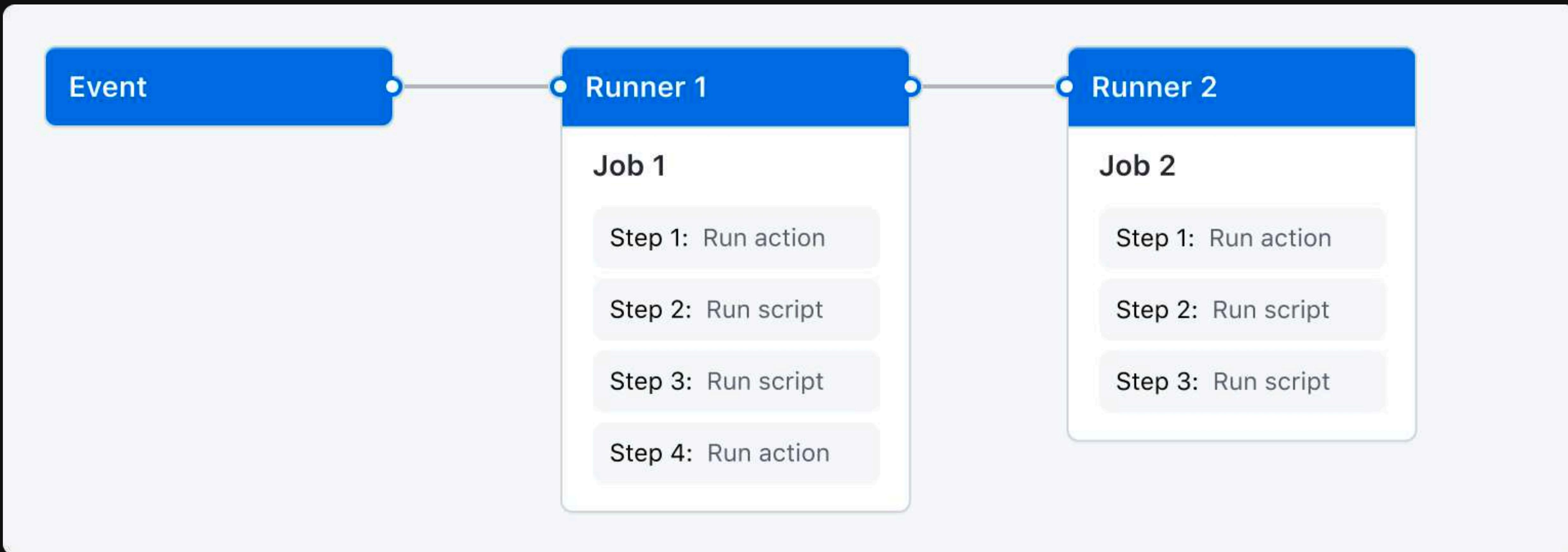
Simple, pay-as-you-go pricing



Private repositories

Included minutes	Additional hosted runner minutes
Free	2,000 minutes per month
Pro	3,000 minutes per month
Team	3,000 minutes per month
Enterprise	50,000 minutes per month
	Linux 2 cores, 7GB \$0.008 per minute
	Windows 2 cores, 7GB \$0.016 per minute
	macOS 3 cores, 7GB \$0.08 per minute
	Self-hosted Free

Included, hosted runner minutes are consumed at different rates for each operating system. GitHub Actions is not available for private repos in legacy per-repository plans. [Learn more](#)



Create an example workflow

GitHub Actions uses YAML syntax to define the workflow. Each workflow is stored as a separate YAML file in your code repository, in a directory named `.github/workflows`.

You can create an example workflow in your repository that automatically triggers a series of commands whenever code is pushed. In this workflow, GitHub Actions checks out the pushed code, installs the [bats](#) testing framework, and runs a basic command to output the bats version:

```
bats -v.
```

1 In your repository, create the `.github/workflows/` directory to store your workflow files.

2 In the `.github/workflows/` directory, create a new file called `learn-github-actions.yml` and add the following code.

```
name: learn-github-actions
on: [push]
jobs:
  check-bats-version:
    runs-on: ubuntu-latest
    steps:
      - uses: actions/checkout@v3
      - uses: actions/setup-node@v3
        with:
          node-version: '14'
      - run: npm install -g bats
      - run: bats -v
```

3 Commit these changes and push them to your GitHub repository.

Your new GitHub Actions workflow file is now installed in your repository and will run automatically each time someone pushes a change to the repository. To see the details about a workflow's execution history, see "[Viewing the activity for a workflow run](#)."

Understanding the workflow file

To help you understand how YAML syntax is used to create a workflow file, this section explains each line of the introduction's example:

```
name: learn-github-actions
```

Optional - The name of the workflow as it will appear in the Actions tab of the GitHub repository.

```
on: [push]
```

Specifies the trigger for this workflow. This example uses the `push` event, so a workflow run is triggered every time someone pushes a change to the repository or merges a pull request. This is triggered by a push to every branch; for examples of syntax that runs only on pushes to specific branches, paths, or tags, see "[Workflow syntax for GitHub Actions](#)."

```
jobs:
```

Groups together all the jobs that run in the `learn-github-actions` workflow.

```
check-bats-version:
```

Defines a job named `check-bats-version`. The child keys will define properties of the job.

```
check-bats-version:
```

Defines a job named `check-bats-version`. The child keys will define properties of the job.

```
runs-on: ubuntu-latest
```

Configures the job to run on the latest version of an Ubuntu Linux runner. This means that the job will execute on a fresh virtual machine hosted by GitHub. For syntax examples using other runners, see "[Workflow syntax for GitHub Actions](#)."

```
steps:
```

Groups together all the steps that run in the `check-bats-version` job. Each item nested under this section is a separate action or shell script.

```
- uses: actions/checkout@v3
```

The `uses` keyword specifies that this step will run `v3` of the `actions/checkout` action. This is an action that checks out your repository onto the runner, allowing you to run scripts or other actions against your code (such as build and test tools). You should use the checkout action any time your workflow will run against the repository's code.

```
- uses: actions/setup-node@v3
  with:
    node-version: '14'
```

This step uses the `actions/setup-node@v3` action to install the specified version of the Node.js (this example uses v14). This puts both the `node` and `npm` commands in your `PATH`.

```
- run: npm install -g bats
```

The `run` keyword tells the job to execute a command on the runner. In this case, you are using `npm` to install the `bats` software testing package.

```
- run: bats -v
```

Finally, you'll run the `bats` command with a parameter that outputs the software version.

Create an example workflow

GitHub Actions uses YAML syntax to define the workflow. Each workflow is stored as a separate YAML file in your code repository, in a directory named `.github/workflows`.

You can create an example workflow in your repository that automatically triggers a series of commands whenever code is pushed. In this workflow, GitHub Actions checks out the pushed code, installs the [bats](#) testing framework, and runs a basic command to output the bats version:

```
bats -v.
```

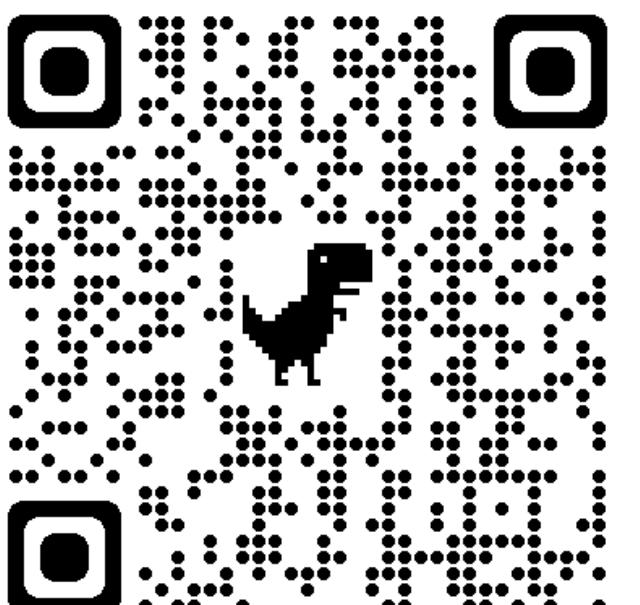
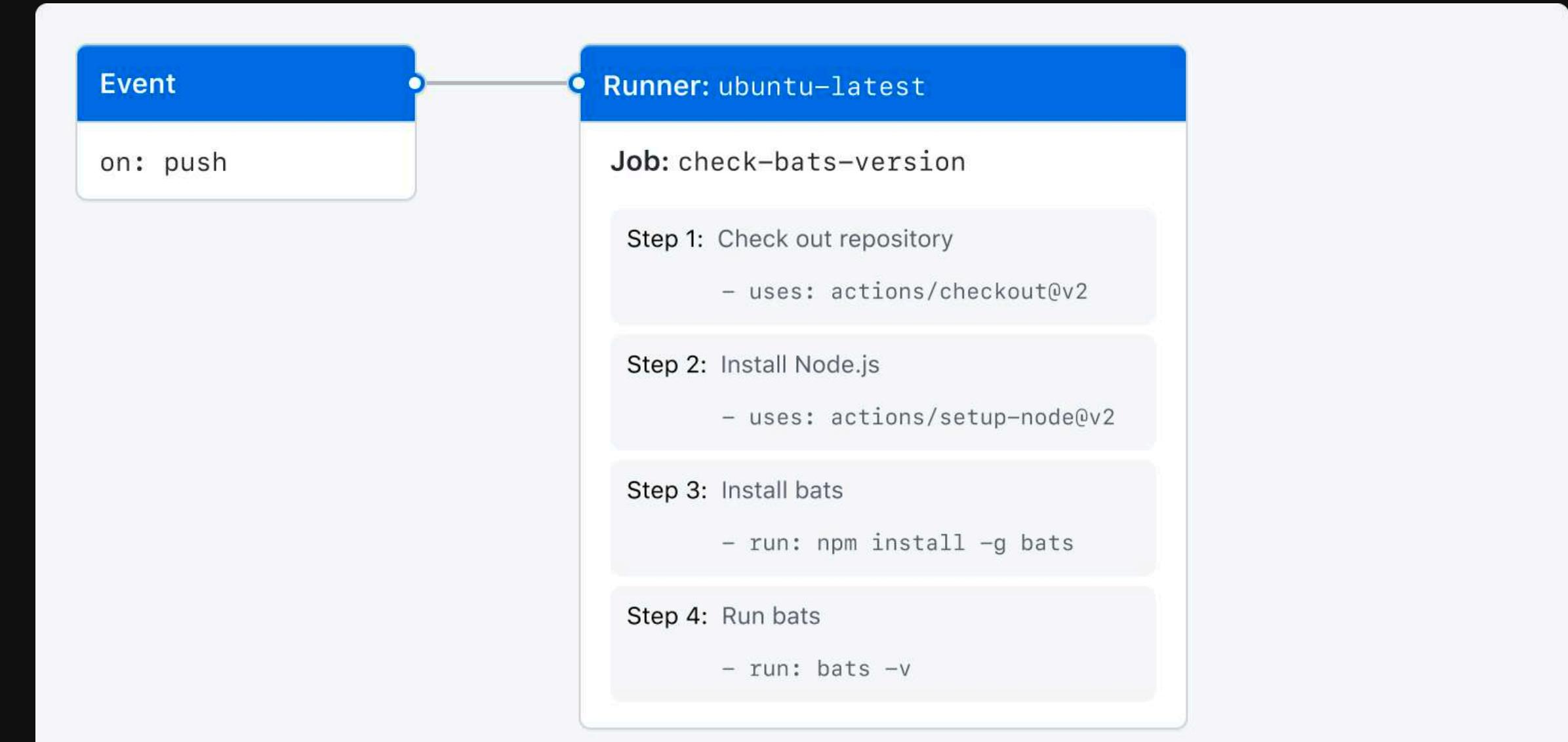
- 1 In your repository, create the `.github/workflows/` directory to store your workflow files.

- 2 In the `.github/workflows/` directory, create a new file called `learn-github-actions.yml` and add the following code.

```
name: learn-github-actions
on: [push]
jobs:
  check-bats-version:
    runs-on: ubuntu-latest
    steps:
      - uses: actions/checkout@v3
      - uses: actions/setup-node@v3
        with:
          node-version: '14'
      - run: npm install -g bats
      - run: bats -v
```

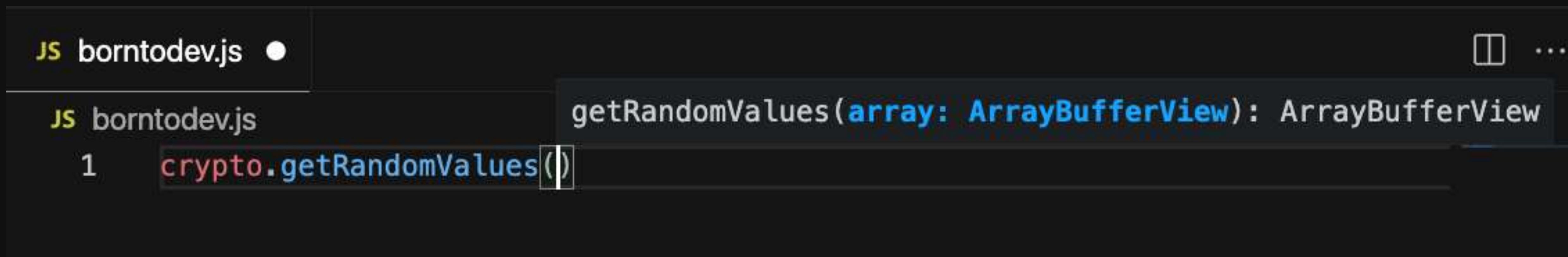
- 3 Commit these changes and push them to your GitHub repository.

Your new GitHub Actions workflow file is now installed in your repository and will run automatically each time someone pushes a change to the repository. To see the details about a workflow's execution history, see "[Viewing the activity for a workflow run](#)."

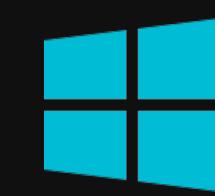


⚡ Special Tricks for VS Code

⚡ Parameter Hints

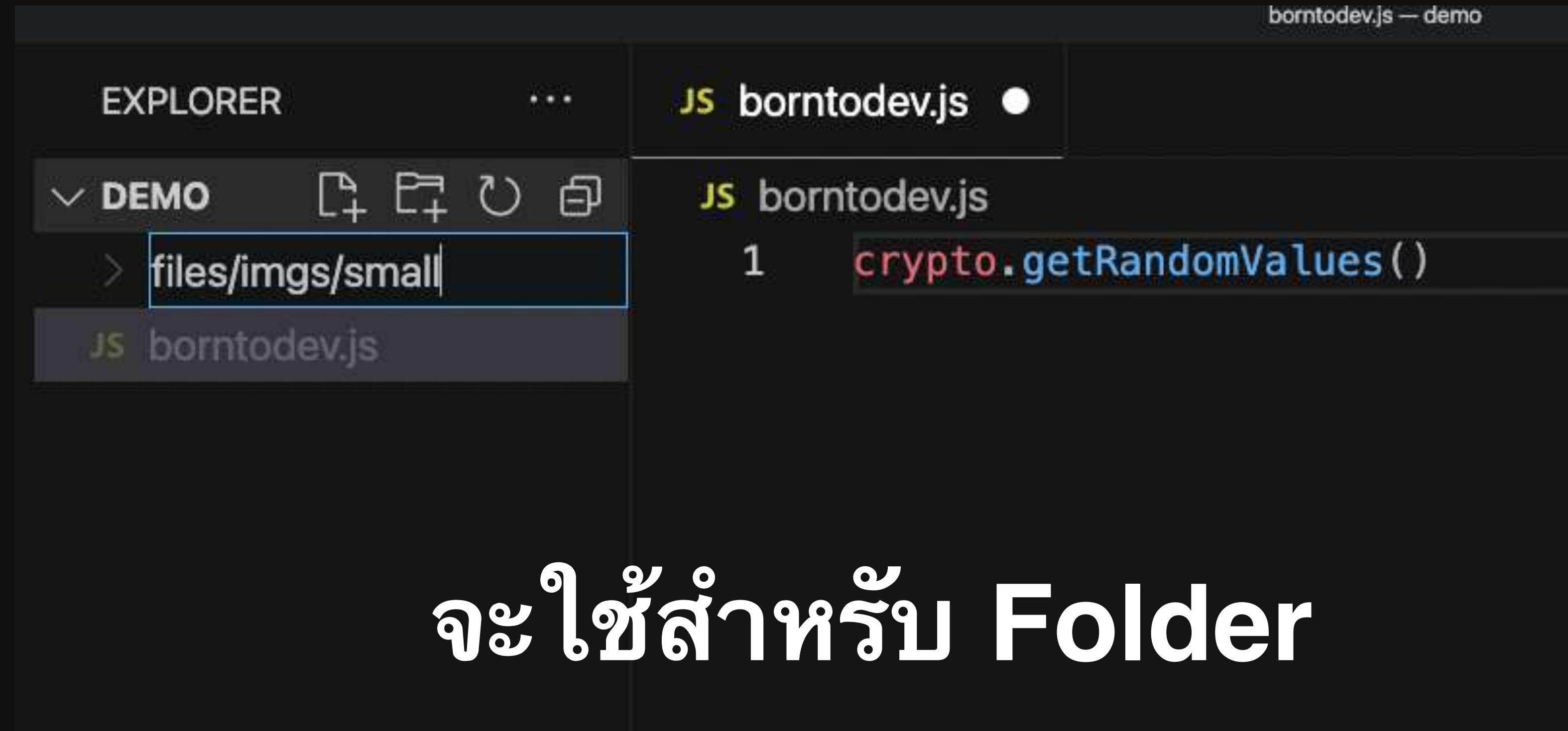


A screenshot of Visual Studio Code showing a code editor window. The file is named 'borntodev.js'. The code being typed is 'crypto.getRandomValues()' on line 1. A tooltip or parameter hint box is open over the 'getRandomValues' call, displaying the signature: 'getRandomValues(array: ArrayBufferView): ArrayBufferView'. The background of the code editor is dark.



CTRL + SHIFT +
SPACE
Command + SHIFT + SPACE

⚡ Auto-Directory



The screenshot shows the Visual Studio Code interface. In the Explorer sidebar, there is a folder named 'DEMO' which contains a subfolder 'files/imgs/small'. A file named 'borntodev.js' is open in the editor. The code in the editor is:

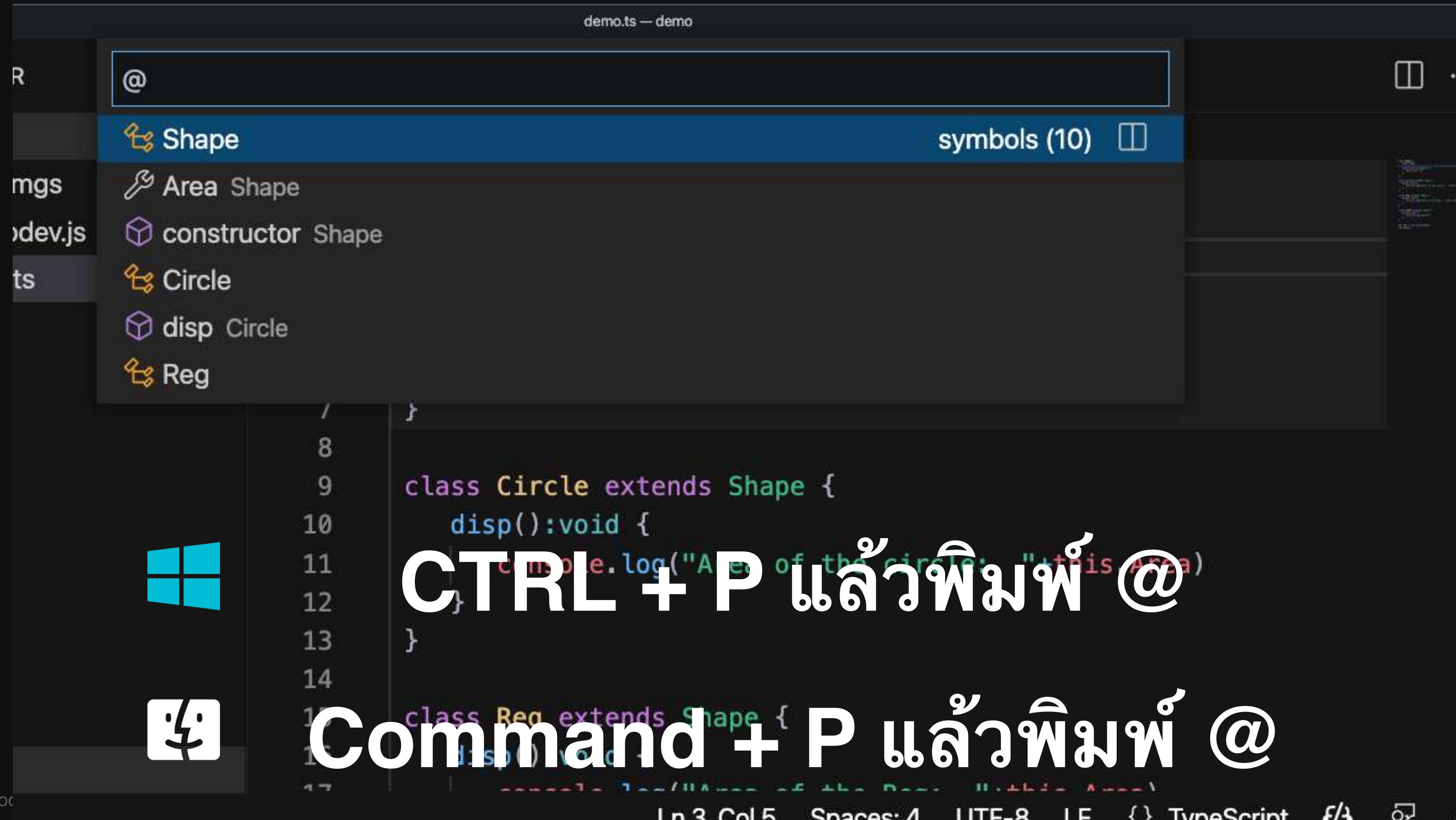
```
JS borntodev.js
1 crypto.getRandomValues()
```

จะใช้สำหรับ Folder

หรือสร้างไฟล์ไปเลยก็ได้



Move around code faster



The screenshot shows the Visual Studio Code interface with a dark theme. A symbol search is open, with the search term '@' typed into the input field. The results list contains ten items, each with a small icon and the name: 'Shape', 'Area Shape', 'constructor Shape', 'Circle', 'disp Circle', and 'Reg'. Below the search interface, a portion of the code editor is visible, showing a class definition for 'Circle' that extends 'Shape' and has a method 'disp()'.

CTRL + P แล้วพิมพ์ @

Command + P แล้วพิมพ์ @

GitHub & Visual Studio Code

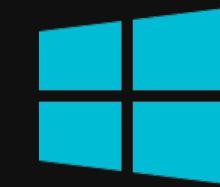
In 3. Col 5 Spaces: 4 UTF-8 {} TypeScript F1



Move lines up or down

```
JS borntodev.js • TS demo.ts • <> demo.html •  
<> demo.html > ⚒ html > ⚒ body > ⚒ div.w3-container.w3-teal > ⚒ h1  
1  <!DOCTYPE html>  
2  <html>  
3  <title>W3.CSS</title>  
4  <meta name="viewport" content="width=device-width, initial-scale=1">  
5  <link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css" type="text/css">  
6  
7  <body>  
8  
9    <div class="w3-container w3-teal">  
10      <h1>Summer Holiday</h1>  
11    </div>  
12  
13    <div class="w3-row-padding w3-margin-top">  
14      <div class="w3-third">  
15        <div class="w3-card-2 w3-white w3-text-grey w3-padding-16 w3-hover-shadow">  
16          <div class="w3-container w3-center w3-padding-16">
```

```
JS borntodev.js • TS demo.ts • <> demo.html •  
<> demo.html > ⚒ html > ⚒ body > ⚒ h1  
● 1  <!DOCTYPE html>  
2  <html>  
3  <title>W3.CSS</title>  
4  <meta name="viewport" content="width=device-width, initial-scale=1">  
5  <link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css" type="text/css">  
6  
7  <body>  
8  
9    <h1>Summer Holiday</h1>  
10   <div class="w3-container w3-teal">  
11     </div>  
12  
13   <div class="w3-row-padding w3-margin-top">  
14     <div class="w3-third">  
15       <div class="w3-card-2 w3-white w3-text-grey w3-padding-16 w3-hover-shadow">  
16         <div class="w3-container w3-center w3-padding-16">
```

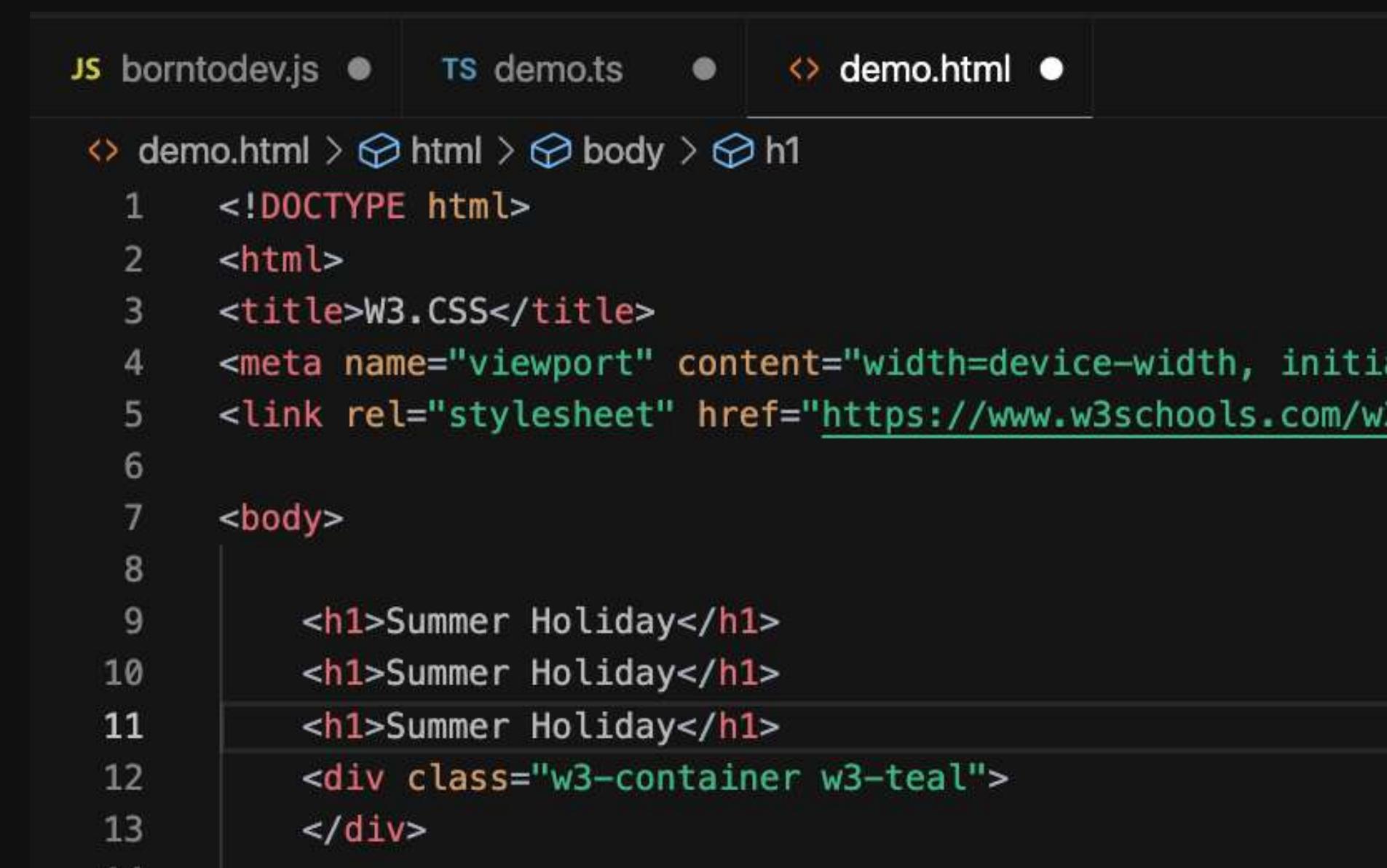


Alt + Up / Down



Option + Up / Down

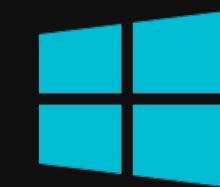
⚡ Copy this line



The screenshot shows the Visual Studio Code interface with three tabs at the top: JS borntodev.js, TS demo.ts, and demo.html. The demo.html tab is active, displaying the following HTML code:

```
<!DOCTYPE html>
<html>
<title>W3.CSS</title>
<meta name="viewport" content="width=device-width, initial-scale=1.0, minimum-scale=1.0">
<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
<body>
<h1>Summer Holiday</h1>
<h1>Summer Holiday</h1>
<h1>Summer Holiday</h1>
<div class="w3-container w3-teal">
</div>
```

The line <h1>Summer Holiday</h1> at line 11 is selected, indicated by a blue selection bar.

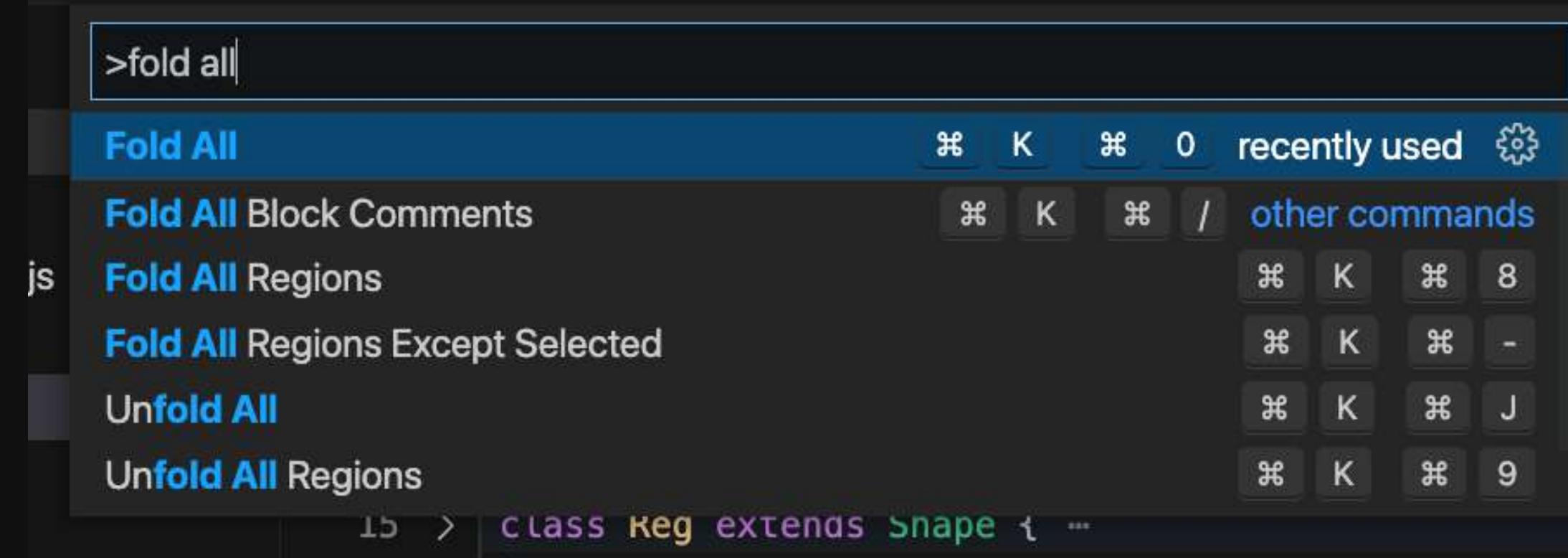


Shift + Alt + Up / Down



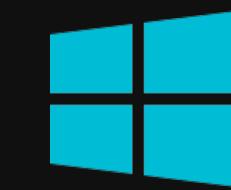
Shift + Option + Up / Down

⚡ Folding



TS demo.ts > Other

```
1 > class Shape { ...
7   }
8
9 > class Circle extends Shape { ...
13  }
14
15 > class Reg extends Shape { ...
19  }
20
21 > class Other extends Shape { ...
25  }
26
27 var obj = new Circle(223);
28 obj.disp()
```



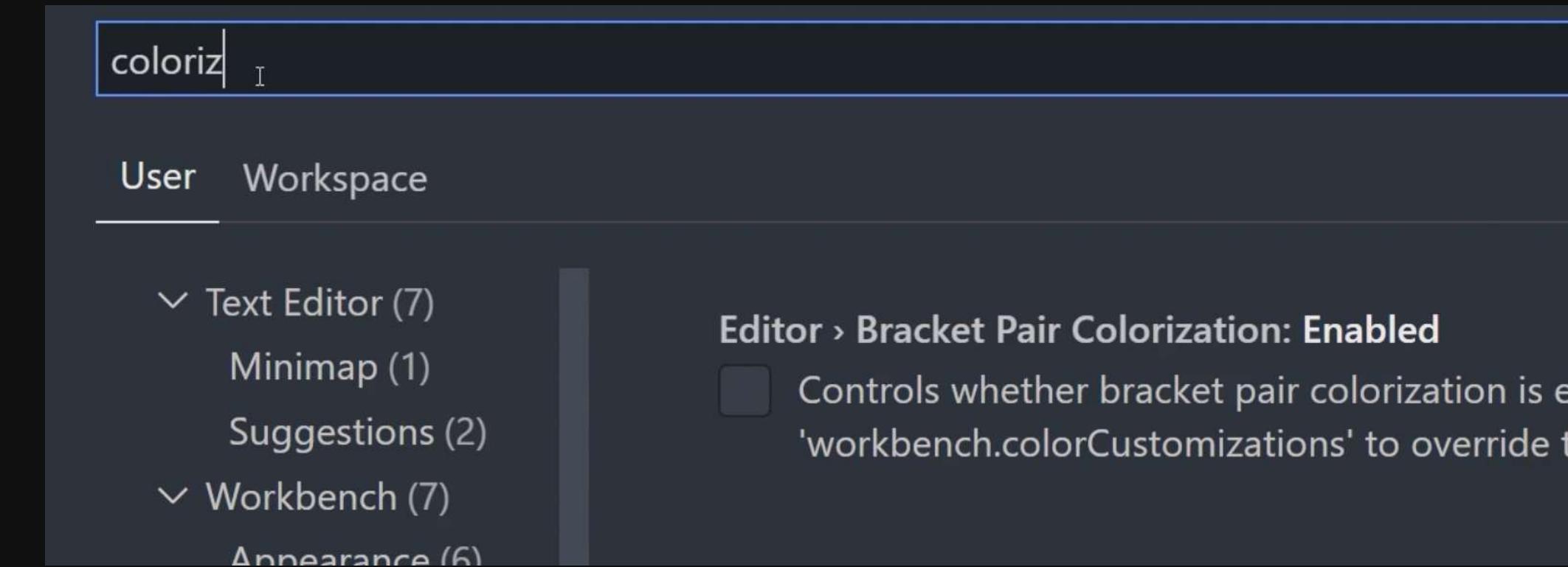
Control + Shift + P



Command + Shift + P

⚡ Colorize the brackets

```
18 class Dog {  
19     bark() {  
20         const makeSound = () => {  
21             return () => {  
22                 return () => {  
23                     }  
24                 }  
25             }  
26         }  
27     }  
28 }
```



```
class Dog {  
    bark() {  
        const makeSound = () => {  
            return () => {  
                return () => {  
                    }  
                }  
            }  
        }  
    }  
}
```

⚡ Create HTML quickly

```
12
13     div>article>header+h1+p+img
14
```

```
12
13     div>article>header+h1+p+img
14         ↗ div>article>header+h1+p+img Emmet Abbreviation
15     <div cl ↗ img:s
```

⚡ Linked Editing

The screenshot shows the Visual Studio Code interface with the following details:

- Top Bar:** Shows three tabs: "demo.ts", "demo.html", and "Settings".
- Code Editor:** Displays the text "link editing".
- Search Bar:** Shows "9 Settings Found" and a "Turn on Settings Sync" button.
- Sidebar:** Titled "Commonly Used (1)", it lists categories: "Text Editor (2)", "Workbench (1)", "Editor Management (1)", "Extensions (5)", and "Markdown (1)".
- Details View:** A modal or expanded view for "Editor: Linked Editing" shows a checked checkbox and the description: "Controls whether the editor has linked editing enabled. Depending on the language, related symbols, e.g. HTML tags, are updated while editing."

⚡ Linked Editing

```
<h1></h1>
<p></p>
<h1>Summer Holiday</h1>
<h1>Summer Holiday</h1>
<h1>Summer Holiday</h1>
<h1>Summer Holiday</h1>
```

```
<p></p>
<p>Summer Holiday</p>
<h1>Summer Holiday</h1>
```

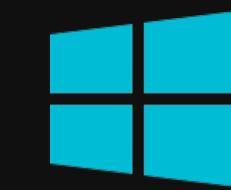


Emmet Balance (Outward)

```
>
Emmet: Balance (outward)
Preferences: Color Theme
Settings Sync: Show Settings

<div class="carousel-item">
  
</div>
<div class="carousel-item">
  
</div>
<div class="carousel-item">
  
</div>
```

```
<div class="carousel-item">
  
</div>
<div class="carousel-item">
  
</div>
```

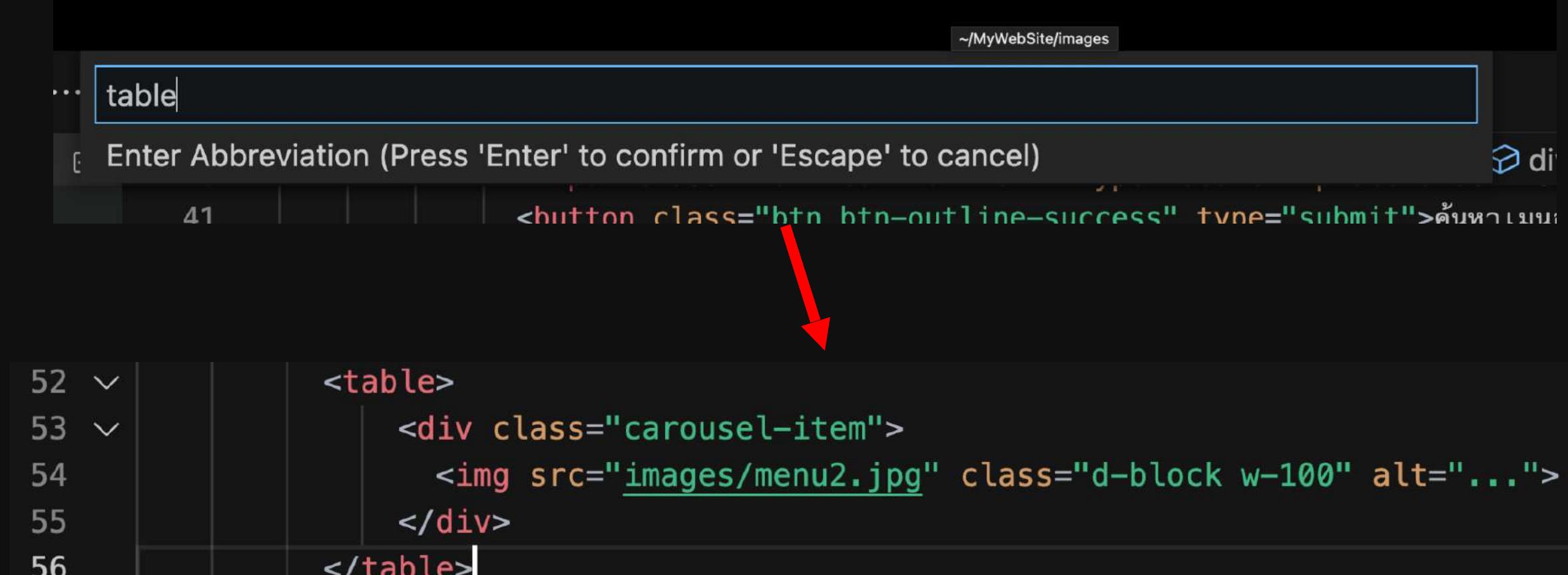
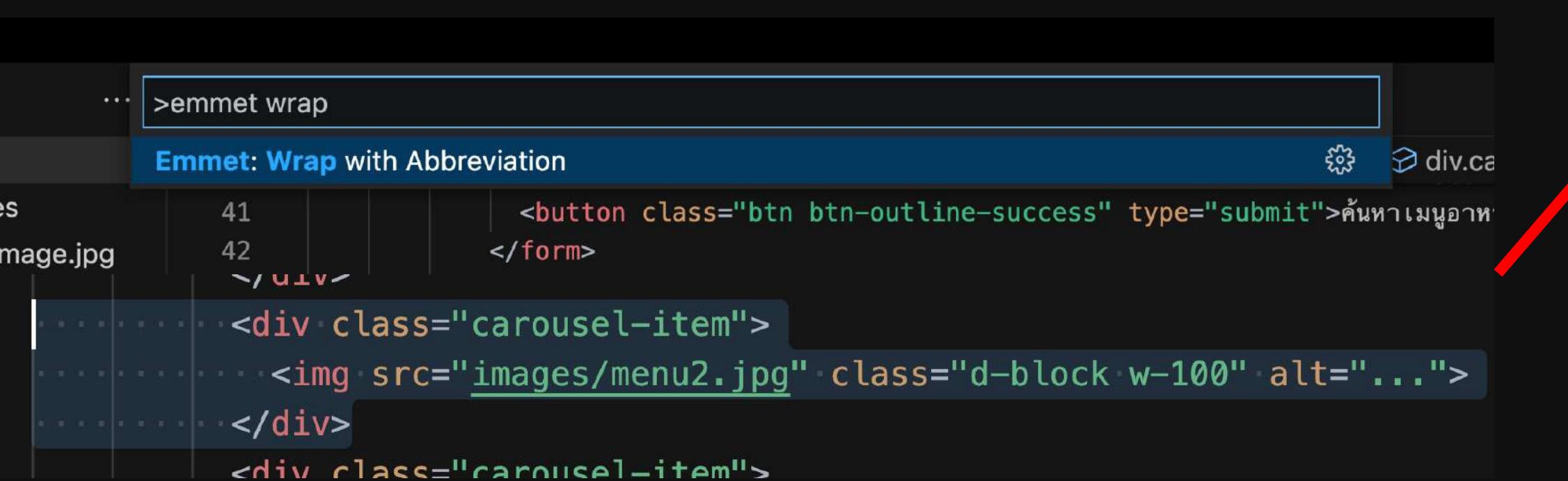


Control + Shift + P



Command + Shift + P

⚡ Emmet Wrap with Abbreviation



Emmet wrap

Emmet: Wrap with Abbreviation

```
<table>
  <tr>
    <td>...</td>
    <td>...</td>
    <td>...</td>
  </tr>
</table>
```

Enter Abbreviation (Press 'Enter' to confirm or 'Escape' to cancel)

... table

41 <button class="btn btn-outline-success" type="submit">ค้นหาเนื้อหา

42 </form>

43 </div>

44 </div>

45 </div>

46 </div>

47 </div>

48 </div>

49 </div>

50 </div>

51 </div>

52 <table>

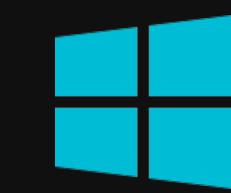
53 <tr>

54 <td>...</td>

55 <td>...</td>

56 </tr>

57 </table>

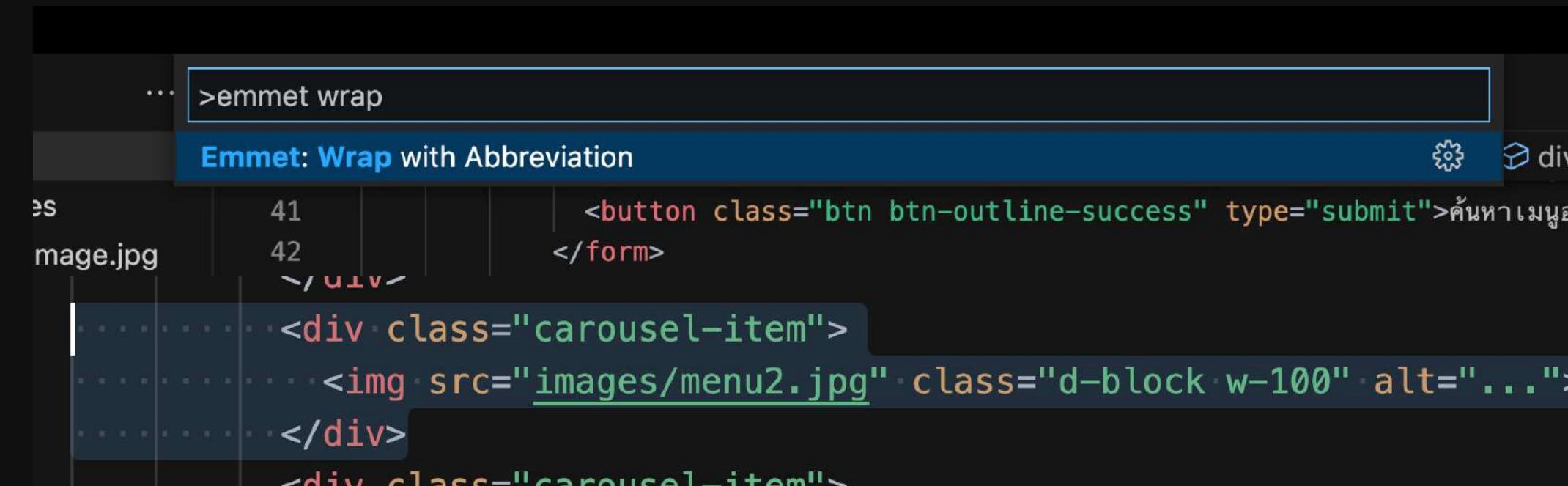


Control + Shift + P

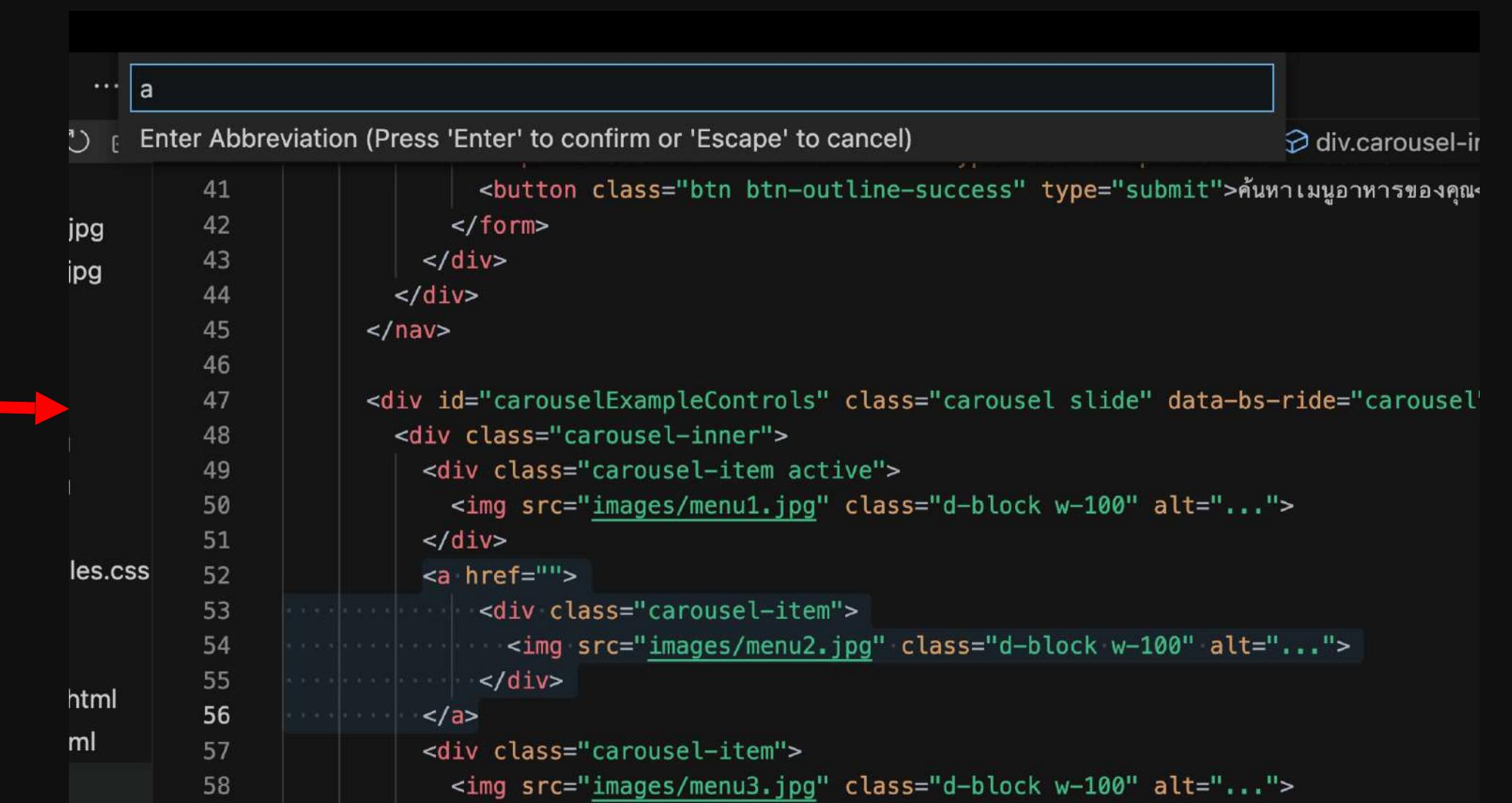


Command + Shift + P

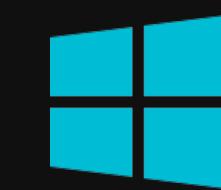
⚡ Emmet Wrap with Abbreviation



The screenshot shows the Emmet interface in Visual Studio Code. The input field contains the text '>emmet wrap'. Below it, a dropdown menu is open with the title 'Emmet: Wrap with Abbreviation'. The code editor shows a snippet of HTML with a button and a carousel item.



The screenshot shows the results of the Emmet command. The input field now contains '... a'. The code editor displays a wrapped HTML structure. Lines 41-46 show a wrapped form, and lines 47-58 show a wrapped carousel item. The wrapped code includes an anchor tag and a div with class 'carousel-item'.

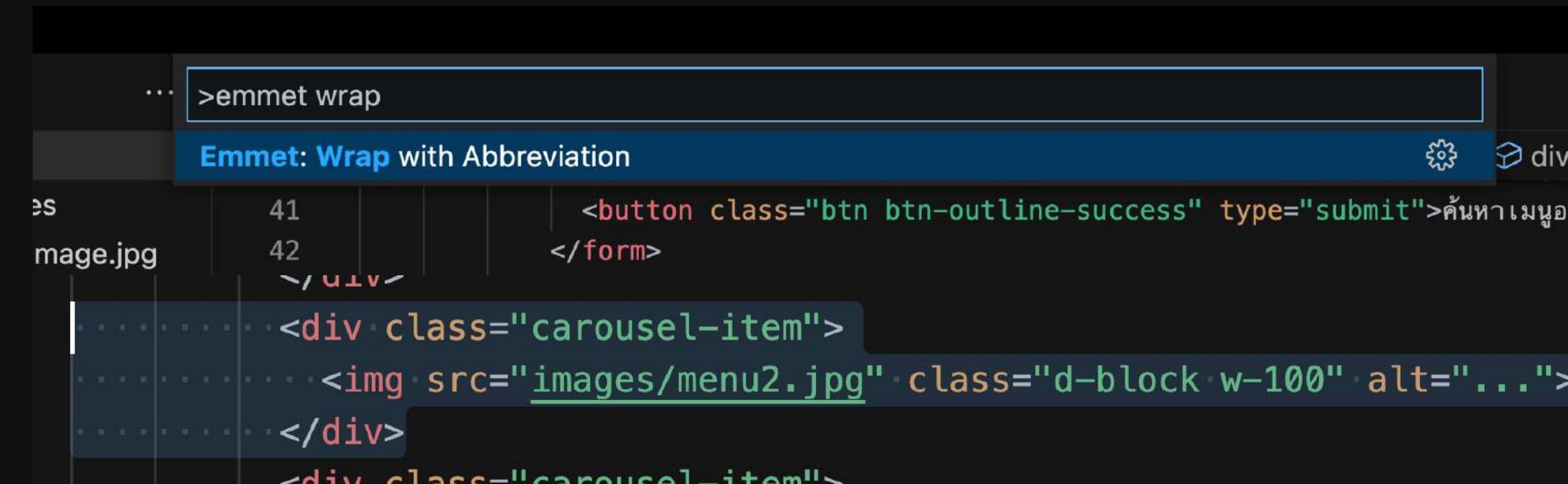


Control + Shift + P

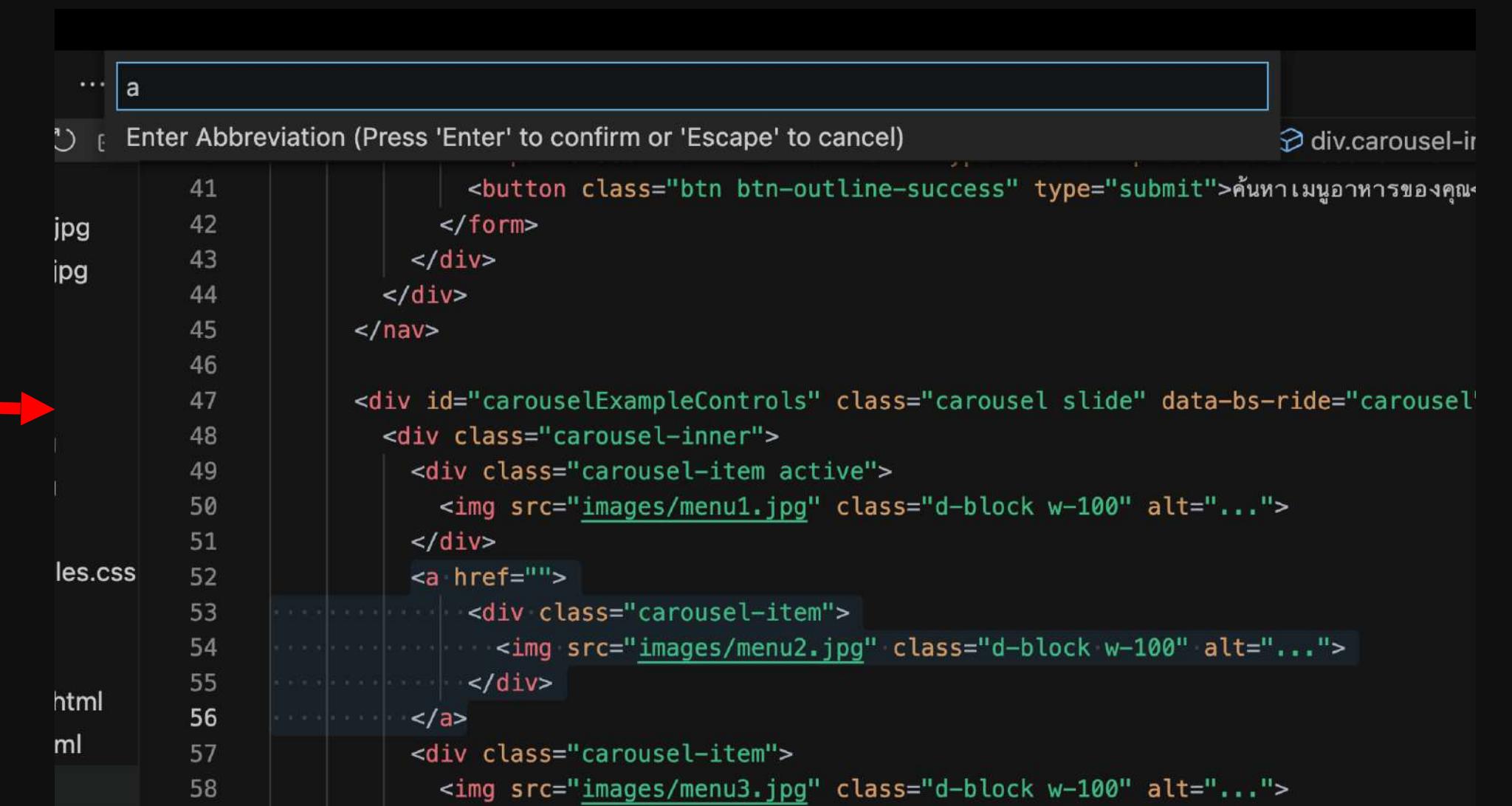


Command + Shift + P

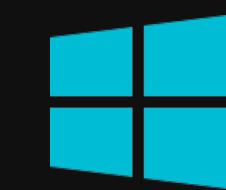
⚡ Emmet Wrap with Abbreviation



The screenshot shows the Emmet interface in VS Code. The input field contains the text '>emmet wrap'. Below it, a dropdown menu is open with the title 'Emmet: Wrap with Abbreviation'. The code editor shows a snippet of HTML related to a carousel.



The screenshot shows the results of the Emmet command. The input field now contains '... a'. The code editor displays a wrapped HTML structure. Lines 41-46 show the wrapped button and form. Lines 47-51 show the wrapped navigation. Lines 52-58 show the wrapped carousel items.



Control + Shift + P

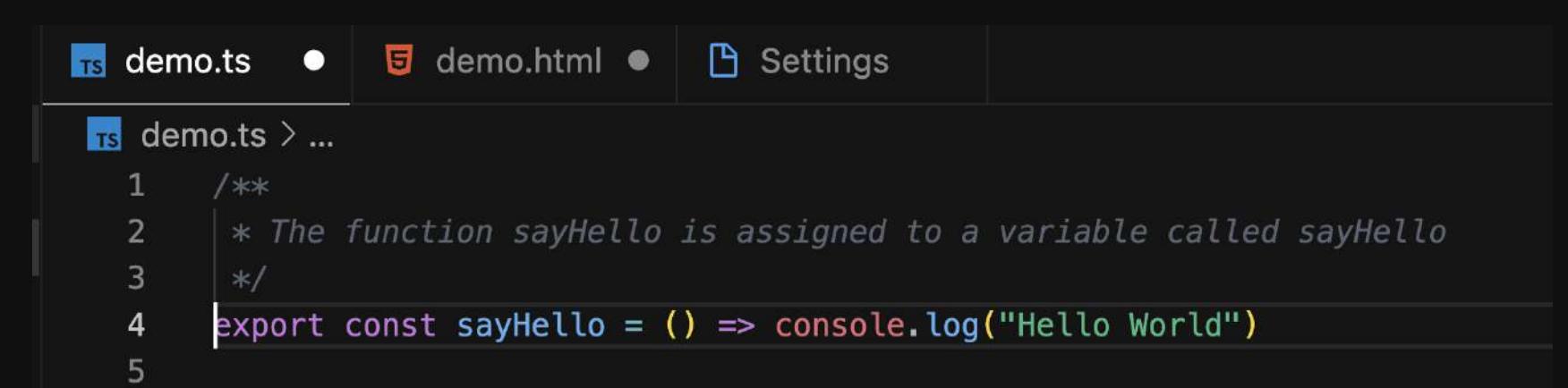


Command + Shift + P

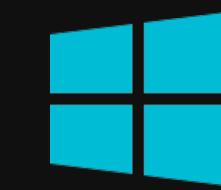
⚡ Mintlify Doc Writer



```
demo.ts demo.html Settings
demo.ts > [e] sayHello
1 export const sayHello = () => console.log("Hello World")
```



```
demo.ts demo.html Settings
demo.ts > ...
1 /**
2  * The function sayHello is assigned to a variable called sayHello
3 */
4 export const sayHello = () => console.log("Hello World")
```



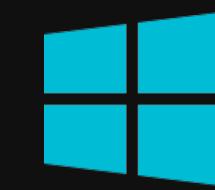
Alt + .



Command + .

⚡ Mintlify Doc Writer

```
● 6  ✓ class Shape {  
  7      | Area:number  
  8  
  9  ✓ | constructor(a:number) {  
 10     |   | this.Area = a  
 11     |   }  
 12  }  
  
● 9  ✓ /**  
 10     * The constructor function is called when a new object is created  
 11     * @param {number} a - number - The parameter name is a. The type is number.  
 12     */  
 13  ✓ | constructor(a:number) {  
 14      |   | this.Area = a  
 15      |   }  
 16  }
```



Alt + .



Command + .

⚡ Snippets

EXTENSIONS: MARKETPLACE

1

javascript snippets

 **JavaScript (ES6) code snippets** ⚡ 9.5M ★ 5
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EXTENSIONS: MA... 1

react snippet

 **ES7+ React/Re...** ⚡ 6.2M ★ 4
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python snippets

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⚡ Snippets



A screenshot of the Visual Studio Code interface showing a code editor with a dark theme. The file is named 'demo.ts'. The code being typed is:

```
1 imrc
2
3 clas
4
5
6
7 importScripts
8 [ImageBitmapRenderingContext]
9 }
```

The word 'imrc' is underlined with a red squiggle, indicating it's a misspelling or a placeholder. A code snippet dropdown menu is open at the bottom of the screen, listing several suggestions:

- imrc → importReactWithComponent
- imrcp → importReactWithComponentAndPropTypes
- imrpc → importReactWithPureComponent
- imrpcp → importReactWithPureComponentAndPropTypes
- imbrc → importRouterSetup

⚡ Snippets

The screenshot shows a Visual Studio Code editor window with two tabs: 'demo.ts 1' and 'demo.ts > ...'. In the first tab, the code is:

```
1 imrc
2
3 clas
4
5
6
7 impo
8 [Imag
9 }
```

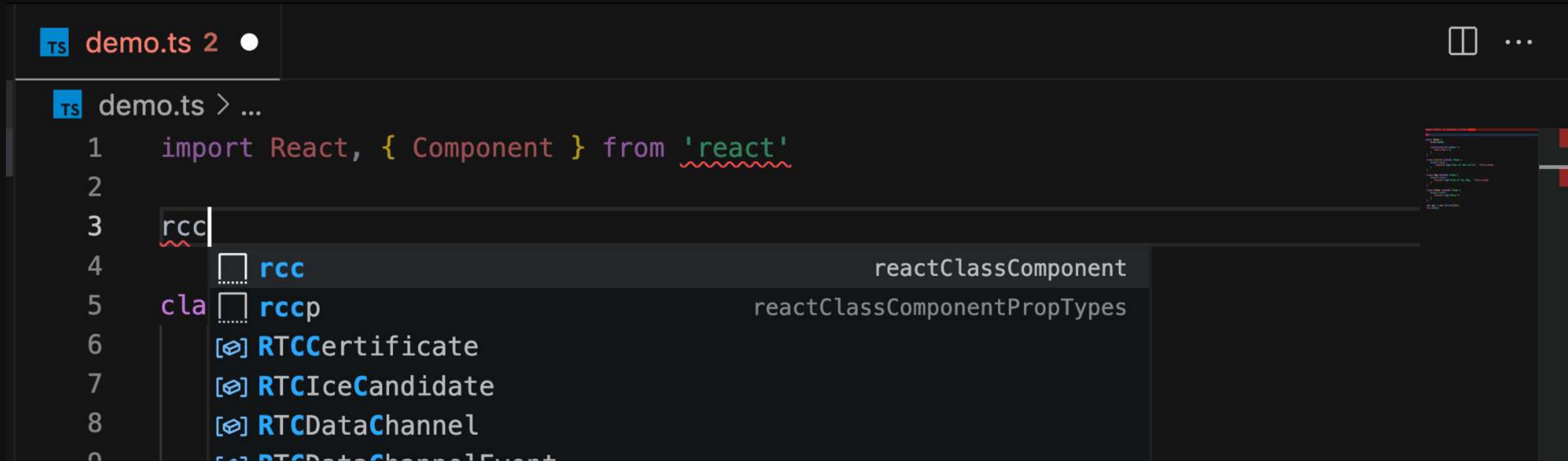
A code completion dropdown is open at the cursor position, showing suggestions for 'imrc':

- imrc (highlighted)
- importReactWithComponent
- imrcp
- importReactWithComponentAndPropTypes
- imrpc
- importReactWithPureComponent
- imrpcp
- importReactWithPureComponentAndPropTypes
- imbr
- import

In the second tab, the code is:

```
1 import React, { Component } from 'react'
2
3
4 class Shape {
```

⚡ Snippets



A screenshot of the Visual Studio Code interface. The top bar shows the file 'demo.ts' with a status of '2'. The main editor area shows the following code:

```
1 import React, { Component } from 'react'  
2  
3 rcc  
4   □ rcc  
5 cla   □ rccp  
6 [⊖] RTCCertificate  
7 [⊖] RTCIceCandidate  
8 [⊖] RTCDDataChannel  
9 [⊖] RTCPDataChannelEvent
```

The word 'react' is underlined with a red squiggle, indicating it's a misspelling or a placeholder for a snippet. A dropdown menu is open at the cursor position, showing two suggestions: 'reactClassComponent' and 'reactClassComponentPropTypes'. The rest of the code in the editor is visible, including imports for 'RTCCertificate', 'RTCIceCandidate', 'RTCDDataChannel', and 'RTCPDataChannelEvent'.

⚡ Snippets

The screenshot shows a dark-themed code editor window for a file named `demo.ts`. The code is a simple React component definition:

```
1 import React, { Component } from 'react'
2
3 rcc
4     □ rcc
5     □ rccp
6     [⊖] RTCCertificate
7     [⊖] RTCIceCandidate
8     [⊖] RTCDDataChannel
9     [⊖] RTCDatagram
10
11 }
```

The word `rcc` is typed in the editor, triggering a code snippet suggestion. A dropdown menu appears with the following options:

- rcc
- rccp
- [⊖] RTCertificate
- [⊖] RTCIceCandidate
- [⊖] RTCDDataChannel
- [⊖] RTCDatagram

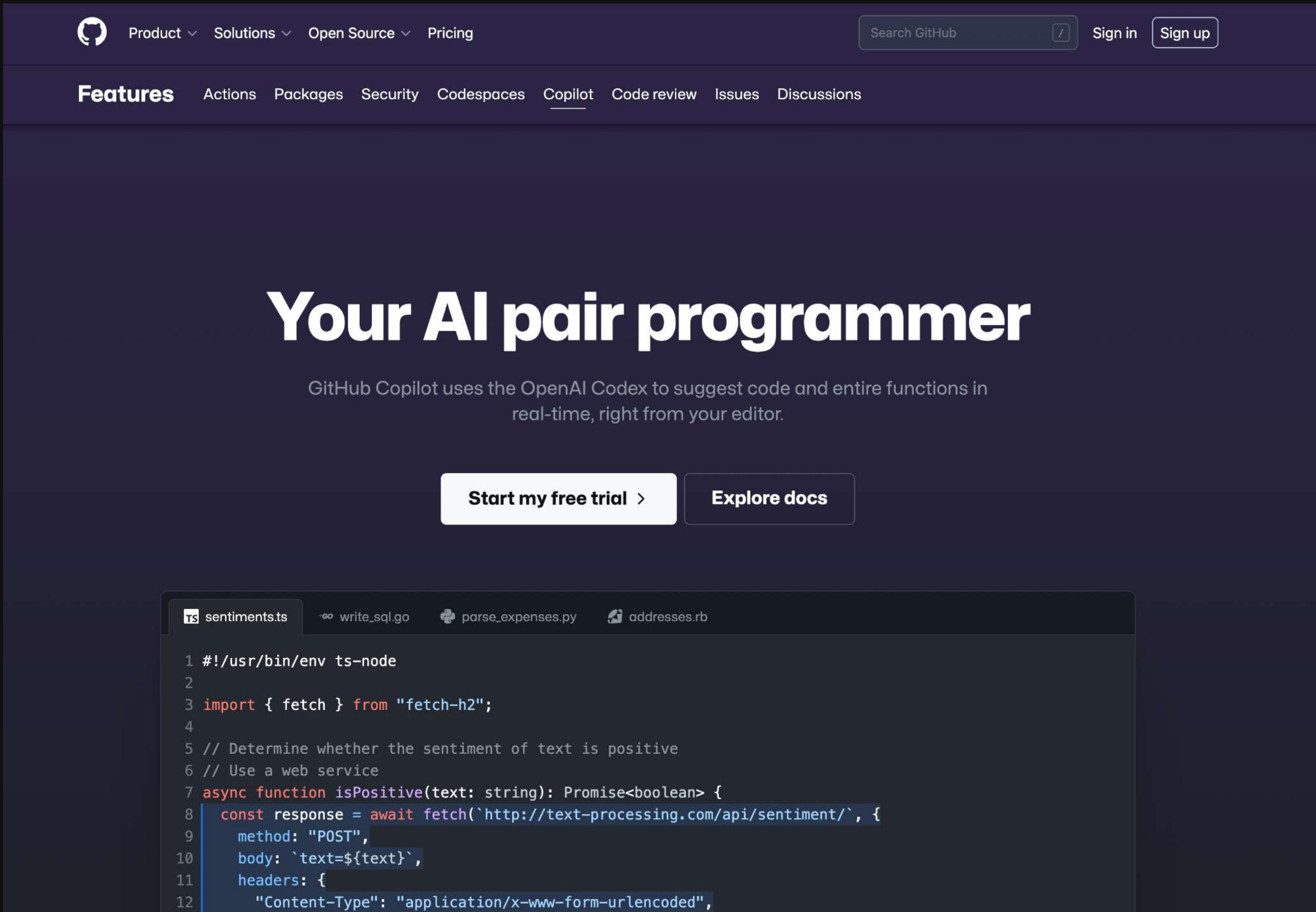
The selected snippet is `rcc`, which expands into the following code:

```
3 import React, { Component } from 'react'
4
5 export default class demo| extends Component {
6     render() {
7         return (
8             <div>demo</div>
9         )
10    }
11 }
```

The placeholder `demo|` is highlighted in blue, indicating it's the part of the snippet that needs to be replaced by the user.



Boost your skills with Copilot



The image shows a screenshot of the GitHub Copilot landing page. At the top, there's a dark purple header with the GitHub logo, navigation links for Product, Solutions, Open Source, and Pricing, a search bar, and sign-in/sign-up buttons. Below the header, a navigation bar includes Features, Actions, Packages, Security, Codespaces, Copilot (which is underlined), Code review, Issues, and Discussions. The main section features a large white title 'Your AI pair programmer' and a subtitle explaining that GitHub Copilot uses the OpenAI Codex to suggest code in real-time. It includes two buttons: 'Start my free trial >' and 'Explore docs'. Below this, a code editor window shows a file named 'sentiments.ts' with the following code:

```
1 #!/usr/bin/env ts-node
2
3 import { fetch } from "fetch-h2";
4
5 // Determine whether the sentiment of text is positive
6 // Use a web service
7 async function isPositive(text: string): Promise<boolean> {
8   const response = await fetch(`http://text-processing.com/api/sentiment/`, {
9     method: "POST",
10    body: `text=${text}`,
11    headers: {
12      "Content-Type": "application/x-www-form-urlencoded",
13    },
14  });
15  const result = await response.json();
16  return result.sentiment === "positive";
17}
```

Trained on billions of lines of code, GitHub Copilot turns natural language prompts into coding suggestions across dozens of languages.



```
8
9 // Get average runtime of successful runs in seconds
10 func averageRuntimeInSeconds(runs []Run) float64 {
11     var totalTime int
12     var failedRuns int
13     for _, run := range runs {
14         if run.Failed {
15             failedRuns++
16         } else {
17             totalTime += run.Time
18         }
19     }
20
21     averageRuntime := float64(totalTime) / float64(len(runs) - failedRuns) / 1000
22     return averageRuntime
23 }
```



Get AI-based suggestions, just for you

GitHub Copilot shares recommendations based on the project's context and style conventions. Quickly cycle through lines of code, complete function suggestions, and decide which to accept, reject, or edit.

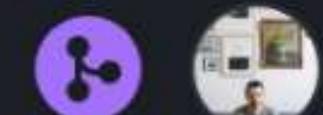
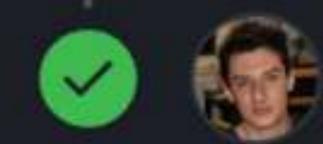


Visual Studio Code

max_sum_slice.py

```
1 def max_sum_slice(xs):
2     max_ending = max_so_far = 0
3     for x in xs:
4         max_ending = max(0, max_ending + x)
5         max_so_far = max(max_so_far, max_ending)
6     return max_so_far
```

[Previous](#) [Next](#) [Accept](#)



Keep flying with your favorite editor

GitHub Copilot integrates directly into your editor including Neovim, JetBrains IDEs, Visual Studio, and Visual Studio Code—and is fast enough to use as you type.



Visual Studio



Neovim



VS Code



JetBrains IDEs

Code confidently in unfamiliar territory

Whether you're working in a new language or framework, or just learning to code, GitHub Copilot can help you find your way. Tackle a bug, or learn how to use a new framework without spending most of your time spelunking through the docs or searching the web.

The screenshot shows a dark-themed GitHub Copilot interface. On the left, there's a sidebar with a 'Fetch tweets' section containing 'Draw a scatterplot', 'Memoization', and 'Goodreads rating'. The main area displays code snippets for various languages: fetch_tweets.js, fetch_tweets.py, fetch_tweets.rb, fetch_tweets.ts, and fetch_tweets.go. The fetch_tweets.py tab is active, showing the following Python code:

```
1 import tweepy, os # secrets in environment variables
2
3 def fetch_tweets_from_user(user_name):
4     # authentication
5     auth = tweepy.OAuthHandler(os.environ['TWITTER_KEY'], os.environ['TWITTER_SECRET'])
6     auth.set_access_token(os.environ['TWITTER_TOKEN'], os.environ['TWITTER_TOKEN_SECRET'])
7     api = tweepy.API(auth)
8
9     # fetch tweets
10    tweets = api.user_timeline(screen_name=user, count=200, include_rts=False)
11
12    return tweets
```

At the bottom of the code editor is a blue 'Copilot' button. Below the editor, there's a 'Replay' button.

Code confidently in unfamiliar territory

Whether you're working in a new language or framework, or just learning to code, GitHub Copilot can help you find your way. Tackle a bug, or learn how to use a new framework without spending most of your time spelunking through the docs or searching the web.

Fetch tweets

Draw a scatterplot

Memoization

Goodreads rating

fetch_tweets.js fetch_tweets.py fetch_tweets.rb fetch_tweets.ts fetch_tweets.go

```
1 const token = process.env["TWITTER_BEARER_TOKEN"]
2
3 const fetchTweetsFromUser = async (screenName, count) => {
4   const response = await fetch(
5     `https://api.twitter.com/1.1/statuses/user_timeline.json?screen_name=${screenName}&count=${count}`
6   )
7   const json = await response.json()
8   return json
9 }
10
11
12 }
```

Copilot

Replay

Code confidently in unfamiliar territory

Whether you're working in a new language or framework, or just learning to code, GitHub Copilot can help you find your way. Tackle a bug, or learn how to use a new framework without spending most of your time spelunking through the docs or searching the web.

Fetch tweets

Draw a scatterplot

Memoization

Goodreads rating

fetch_tweets.js fetch_tweets.py fetch_tweets.rb fetch_tweets.ts fetch_tweets.go

```
1 require 'twitter'  
2  
3 def fetch_tweets_from_user(handle)  
4   twitter = Twitter::REST::Client.new do |config|  
5     config.consumer_key        = ENV['TWITTER_CONSUMER_KEY']  
6     config.consumer_secret    = ENV['TWITTER_CONSUMER_SECRET']  
7     config.access_token       = ENV['TWITTER_ACCESS_TOKEN']  
8     config.access_token_secret = ENV['TWITTER_ACCESS_TOKEN_SECRET']  
9   end  
10  tweets = twitter.user_timeline(handle)  
11  tweets  
12 end
```

Copilot

Replay

Code confidently in unfamiliar territory

Whether you're working in a new language or framework, or just learning to code, GitHub Copilot can help you find your way. Tackle a bug, or learn how to use a new framework without spending most of your time spelunking through the docs or searching the web.

The screenshot shows the GitHub Copilot interface. On the left, there's a sidebar with a button labeled "Fetch tweets" and three collapsed sections: "Draw a scatterplot", "Memoization", and "Goodreads rating". The main area displays a code editor with tabs for various languages: JS, fetch_tweets.js; PY, fetch_tweets.py; RB, fetch_tweets.rb; TS, fetch_tweets.ts; and GO, fetch_tweets.go. The code itself is a function named `fetchTweetsFromUser` that uses the Twitter API to fetch tweets from a user by screen name. The code is written in TypeScript, with some parts like the URL and headers being completed by the AI.

```
1 const token = process.env["TWITTER_BEARER_TOKEN"]
2
3 const fetchTweetsFromUser = (userName: string) => {
4   const url = `https://api.twitter.com/1.1/statuses/user_timeline.json?screen_name=${userName}`
5   return fetch(url, {
6     headers: {
7       "Authorization": `Bearer ${token}`
8     }
9   })
10  .then(res => res.json())
11  .then(tweets => tweets.map(tweet => {
12    id: tweet.id,
13    text: tweet.text,
14    created_at: tweet.created_at,
15    user: {
16      id: tweet.user.id,
17      name: tweet.user.name,
18      screen_name: tweet.user.screen_name,
19      profile_image_url: tweet.user.profile_image_url
20    }
21  })))
22 }
```

Code confidently in unfamiliar territory

Whether you're working in a new language or framework, or just learning to code, GitHub Copilot can help you find your way. Tackle a bug, or learn how to use a new framework without spending most of your time spelunking through the docs or searching the web.

Fetch tweets

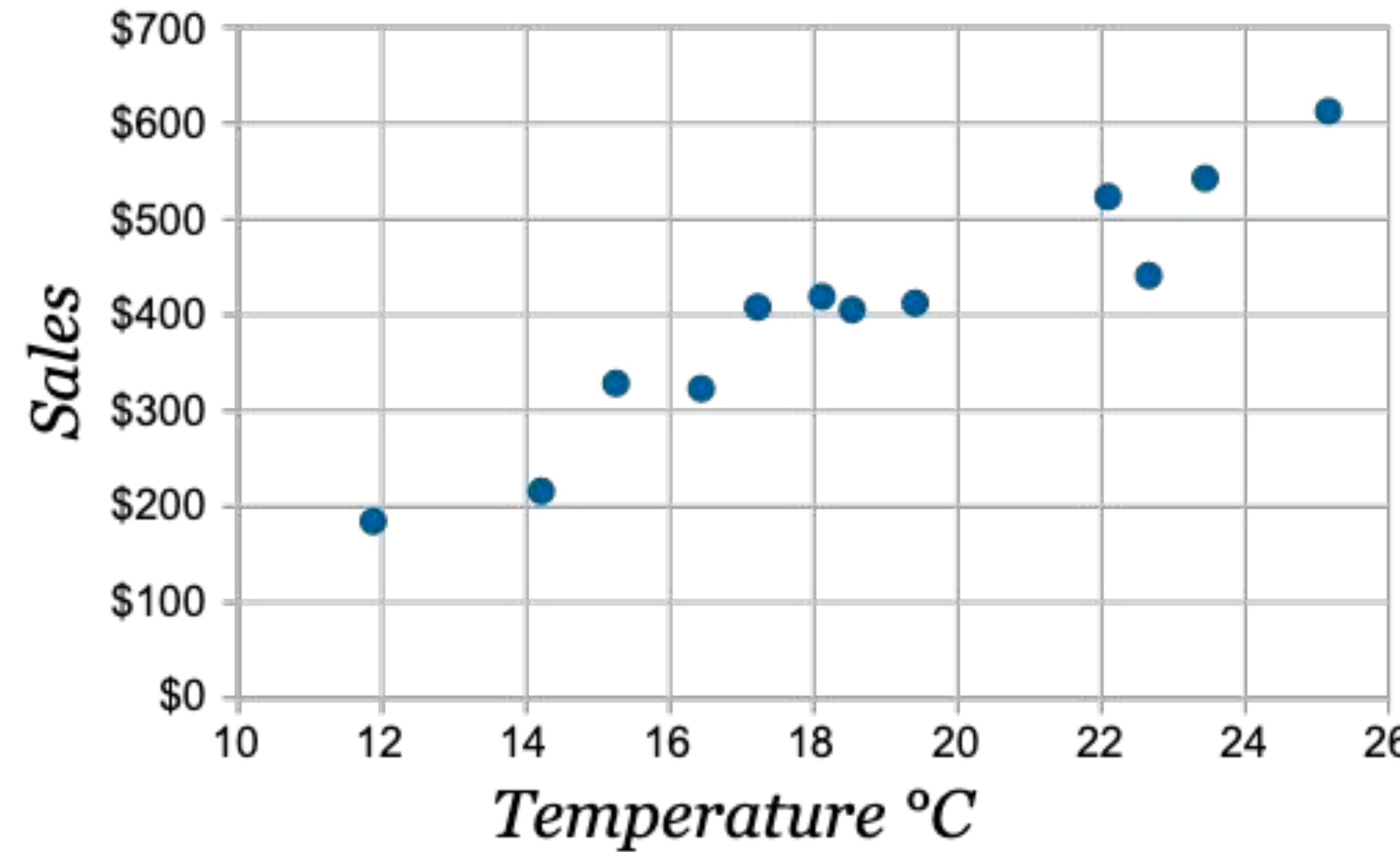
Draw a scatterplot

Memoization

Goodreads rating

fetch_tweets.js fetch_tweets.py fetch_tweets.rb fetch_tweets.ts fetch_tweets.go

```
1 package main
2
3 var apiKey = os.Getenv("TWITTER_BEARER_TOKEN")
4 type Tweet = struct{ Text string }
5
6 func fetchTweetsFromUser(user string) ([]Tweet, error) {
7     url := "https://api.twitter.com/1.1/statuses/user_timeline.json?screen_name=" + user + "&count=100"
8     req, err := http.NewRequest("GET", url, nil)
9     if err != nil {
10         return nil, err
11     }
12     req.Header.Set("Authorization", "Bearer "+apiKey)
13     resp, err := http.DefaultClient.Do(req)
14     if err != nil {
15         return nil, err
16     }
17     defer resp.Body.Close()
18     if resp.StatusCode != 200 {
19         return nil, fmt.Errorf("bad status: %d", resp.StatusCode)
20     }
21     var tweets []Tweet
22     if err := json.NewDecoder(resp.Body).Decode(&tweets); err != nil {
23         return nil, err
24     }
```



Code confidently in unfamiliar territory

Whether you're working in a new language or framework, or just learning to code, GitHub Copilot can help you find your way. Tackle a bug, or learn how to use a new framework without spending most of your time spelunking through the docs or searching the web.

The screenshot shows the GitHub Copilot interface integrated into a dark-themed code editor. On the left, there's a sidebar with links: 'Fetch tweets', 'Draw a scatterplot' (which is highlighted with a blue background), 'Memoization', and 'Goodreads rating'. The main area displays a code editor with tabs for 'draw_scatterplot.js', 'draw_scatterplot.py', 'draw_scatterplot.rb', and 'draw_scatterplot.ts'. The 'draw_scatterplot.js' tab is active, showing the following code:

```
1 import d3 from "d3"
2
3 const drawScatterplot = (data, height, width) => {
4   const svg = d3.select("#scatterplot")
5     .append("svg")
6     .attr("height", height)
7     .attr("width", width)
8
9   svg.selectAll("circle")
10    .data(data)
11    .enter()
12    .append("circle")
13    .attr("cx", d => d.x)
14    .attr("cy", d => d.y)
15    .attr("r", 5)
16 }
```

At the bottom of the code editor, there's a blue button labeled 'Copilot' with a gear icon. Below the code editor, there's a small 'Replay' button with a circular arrow icon.

Code confidently in unfamiliar territory

Whether you're working in a new language or framework, or just learning to code, GitHub Copilot can help you find your way. Tackle a bug, or learn how to use a new framework without spending most of your time spelunking through the docs or searching the web.

The screenshot shows a dark-themed GitHub Copilot interface. On the left, there's a sidebar with links: 'Fetch tweets', 'Draw a scatterplot' (which is highlighted with a blue border), 'Memoization', and 'Goodreads rating'. The main area displays code completion suggestions for 'draw_scatterplot.py'. The suggestions are listed as tabs at the top: 'draw_scatterplot.js', 'draw_scatterplot.py' (which is selected and has a blue background), 'draw_scatterplot.rb', and 'draw_scatterplot.ts'. Below the tabs is a code snippet:

```
1 import matplotlib.pyplot as plt
2
3 def draw_scatterplot(x_values, y_values):
4     plt.scatter(x_values, y_values, s=20)
5     plt.title("Scatter Plot")
6     plt.xlabel("x values")
7     plt.ylabel("y values")
8     plt.show()
```

At the bottom of the suggestion list is a blue button labeled 'Copilot'. To the right of the suggestion list is a 'Replay' button with a circular arrow icon.

Code confidently in unfamiliar territory

Whether you're working in a new language or framework, or just learning to code, GitHub Copilot can help you find your way. Tackle a bug, or learn how to use a new framework without spending most of your time spelunking through the docs or searching the web.

The screenshot shows a dark-themed GitHub Copilot interface. On the left, there's a sidebar with three items: "Fetch tweets" (with a Twitter icon), "Draw a scatterplot" (with a scatterplot icon, which is highlighted with a blue rounded rectangle), and "Memoization" (with a memoization icon). Below these is another item: "Goodreads rating" (with a Goodreads icon). At the top right, there are four tabs for different file types: "draw_scatterplot.js", "draw_scatterplot.py", "draw_scatterplot.rb", and "draw_scatterplot.ts". The "draw_scatterplot.py" tab is active. The main area contains a snippet of Python code:

```
1 require 'gruff'  
2  
3 def draw_scatterplot(x_values, y_values)  
4     g = Gruff::Scatter.new(400)  
5     g.title = "GCD"  
6     g.x_axis_label = "X"  
7     g.y_axis_label = "Y"  
8     g.data('data', x_values, y_values)  
9     g.write("plot.png")  
10 end
```

Below the code is a blue button labeled "Copilot". At the bottom right of the main area is a "Replay" button with a circular arrow icon.



Don't fly solo

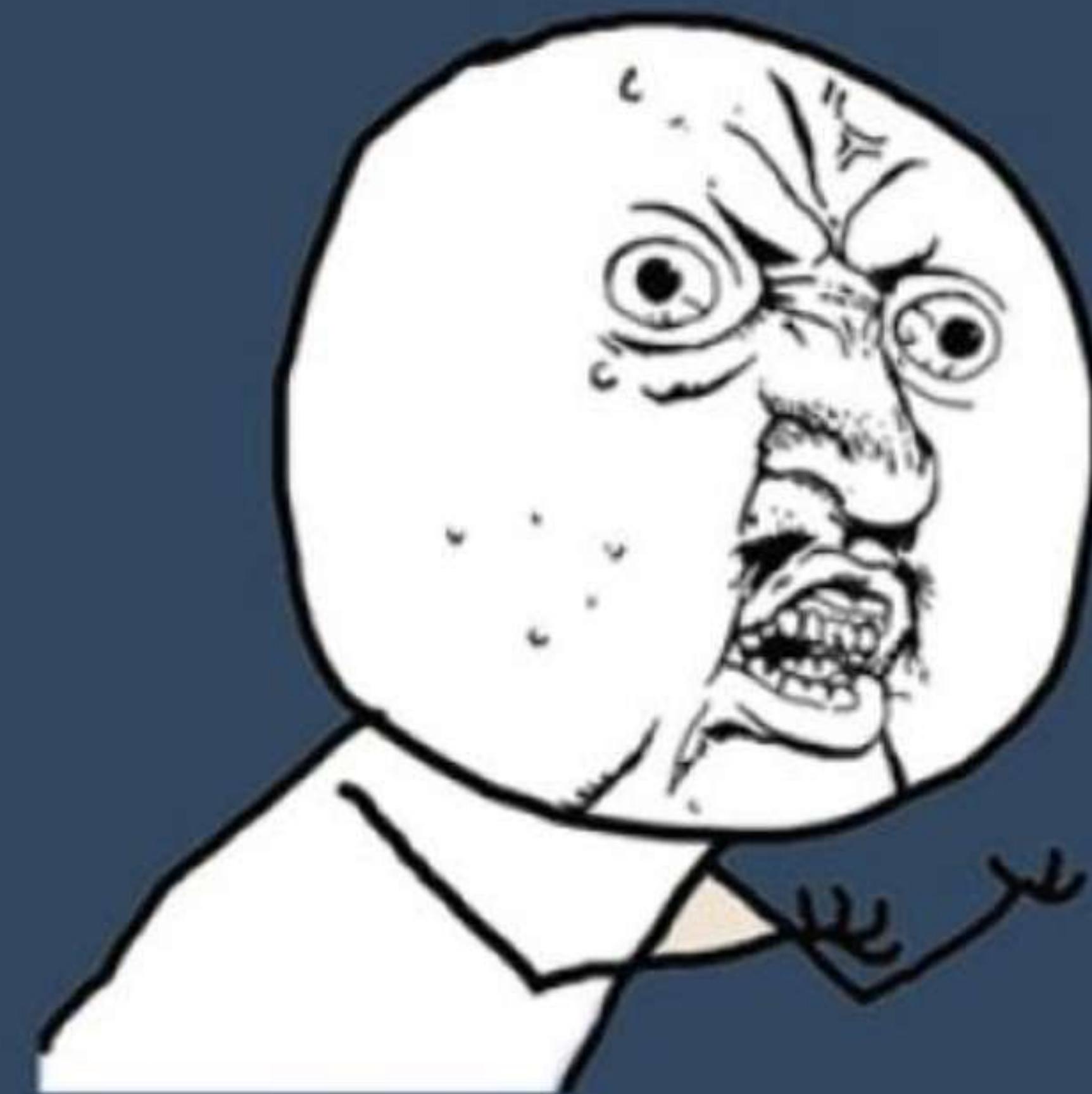
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ไม่นะ..ไอหมอนี่มัน



ชายของนี่นา

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เชดเช.. ของฟรีที่คิมากกก

Copilot

- **I work on open source projects, can I get access to GitHub Copilot for free?**

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Yes, if you are a teacher within our GitHub Global Campus Program, you get access to GitHub Copilot. It is offered to you for no charge when you visit the GitHub Copilot subscription page. If you see a charge then you do not meet the criteria as a verified teacher at this time. Learn more about how to [apply for GitHub Global Campus teacher benefits](#)

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If you already subscribed to Copilot or signed up for the free trial, but you are interested in accessing your free Teacher subscription and you have already been verified within our GitHub Global Campus Program, you will need to cancel that subscription/trial before you can subscribe to Copilot for free. [Click through for instructions on how you can cancel your current Copilot subscription](#). Once you have successfully cancelled your current subscription you can [contact Support](#) to request further instructions.

- **I am a student, can I get access to GitHub Copilot for free?**

Yes, if you are a student within our GitHub Global Campus Program, you get access to GitHub Copilot for free through the Student Developer Pack. If you are a GitHub Global Campus Student then you will see that GitHub Copilot is offered to you for no charge when you visit the GitHub Copilot subscription page. If you see a charge then you do not meet the criteria as a verified student at this time. Learn more about how to [apply for the GitHub Student Developer Pack](#)

ทำไมเราต้องมาสนใจ เรื่อง Productivity ด้วยนะ ?

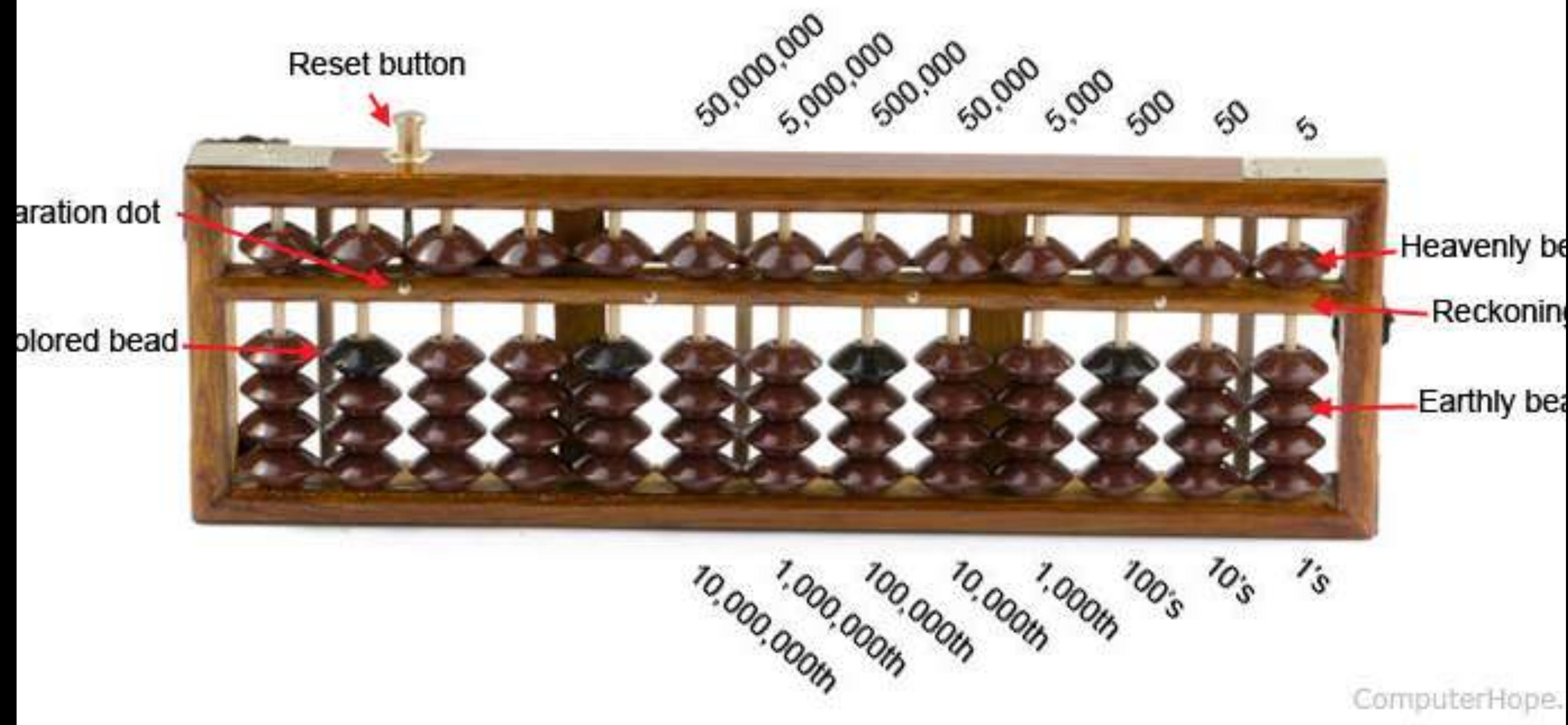


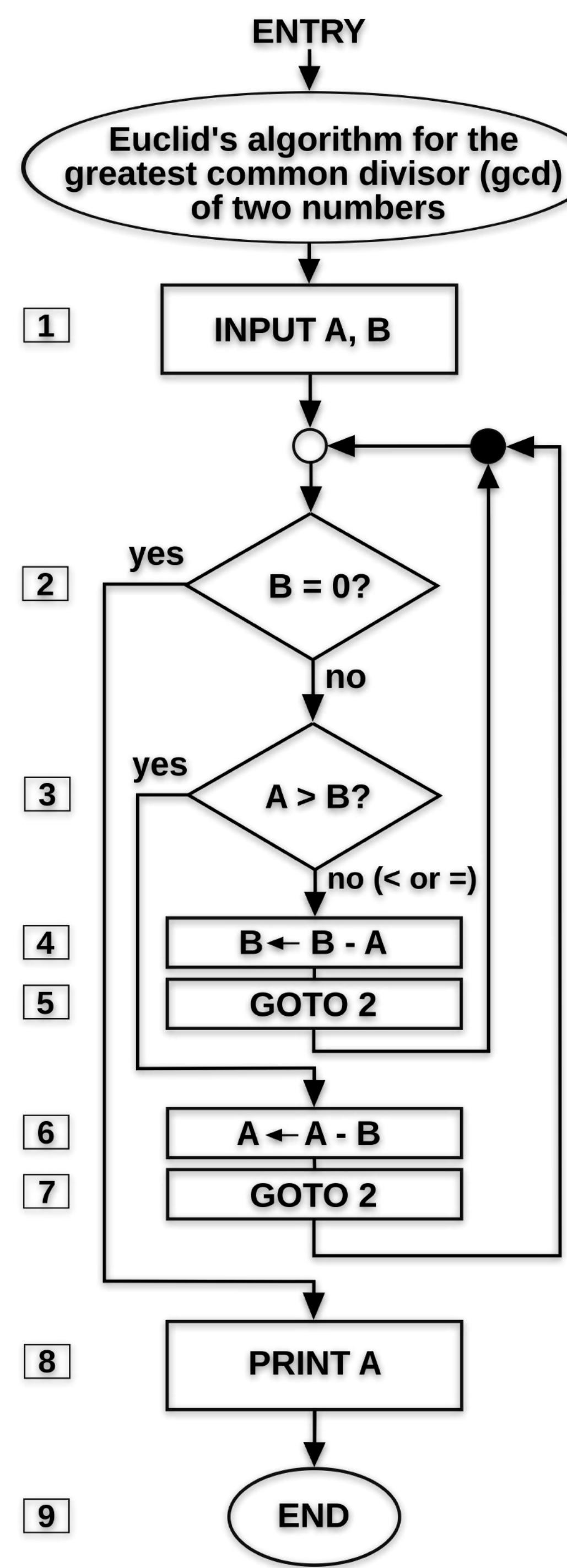


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Modern Abacus





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มันก็คือเรื่องของการที่เราพยายาม
ที่จะสร้างเครื่องมือขึ้นมาแก้ไขปัญหาอะไรสักอย่าง”

- Prame borntoDev (ตруอ่ง ไม่ต้องอิงจากใคร)

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Thread: [9144] Main Thread Stack Frame: Microsoft.NetConf2021.Maui.Help...

Settings.cs Config.cs HeaderControl.xaml XAML Live Preview Window: [HWND 0x00180bca]

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SearchBar (searchBar)

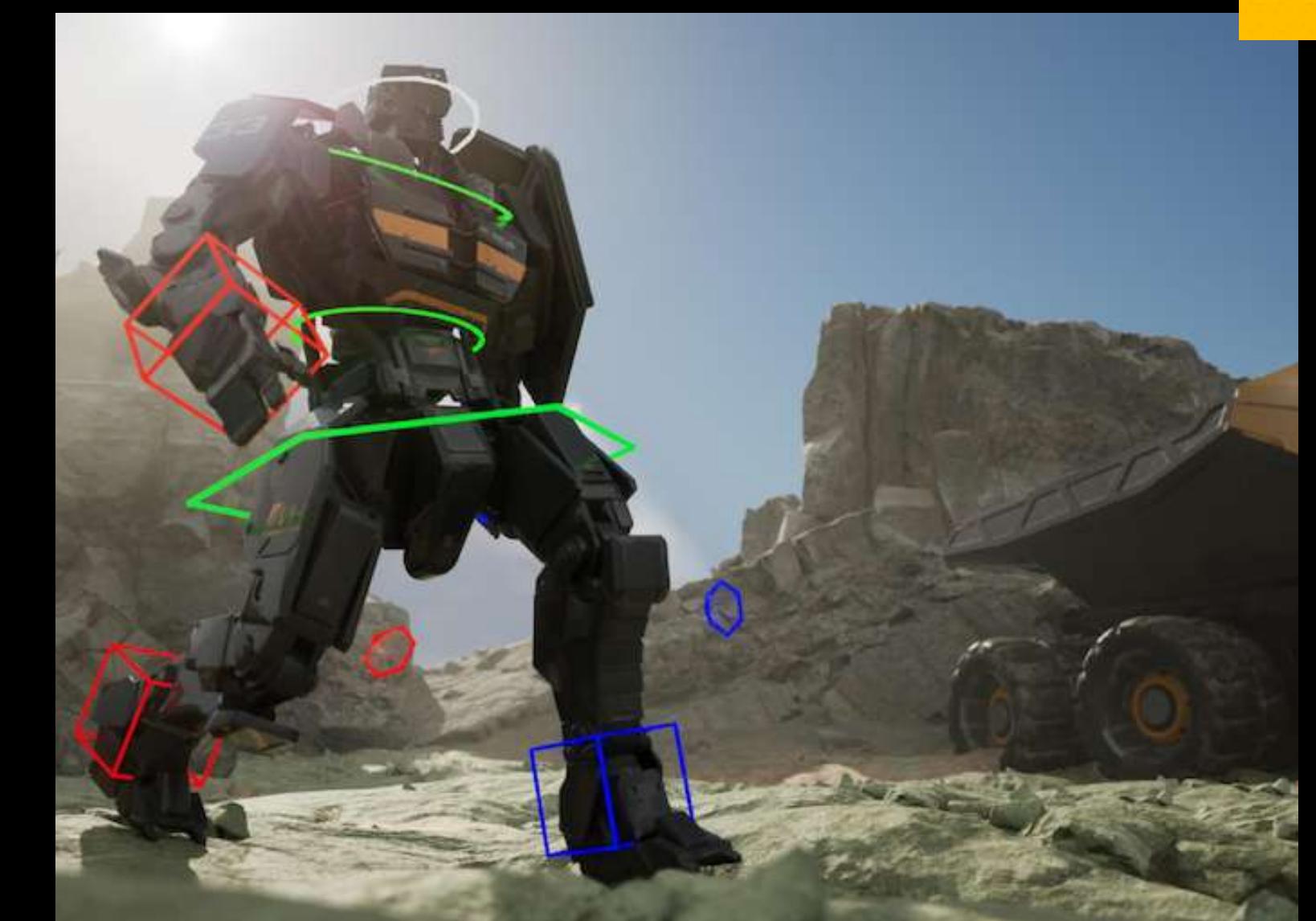
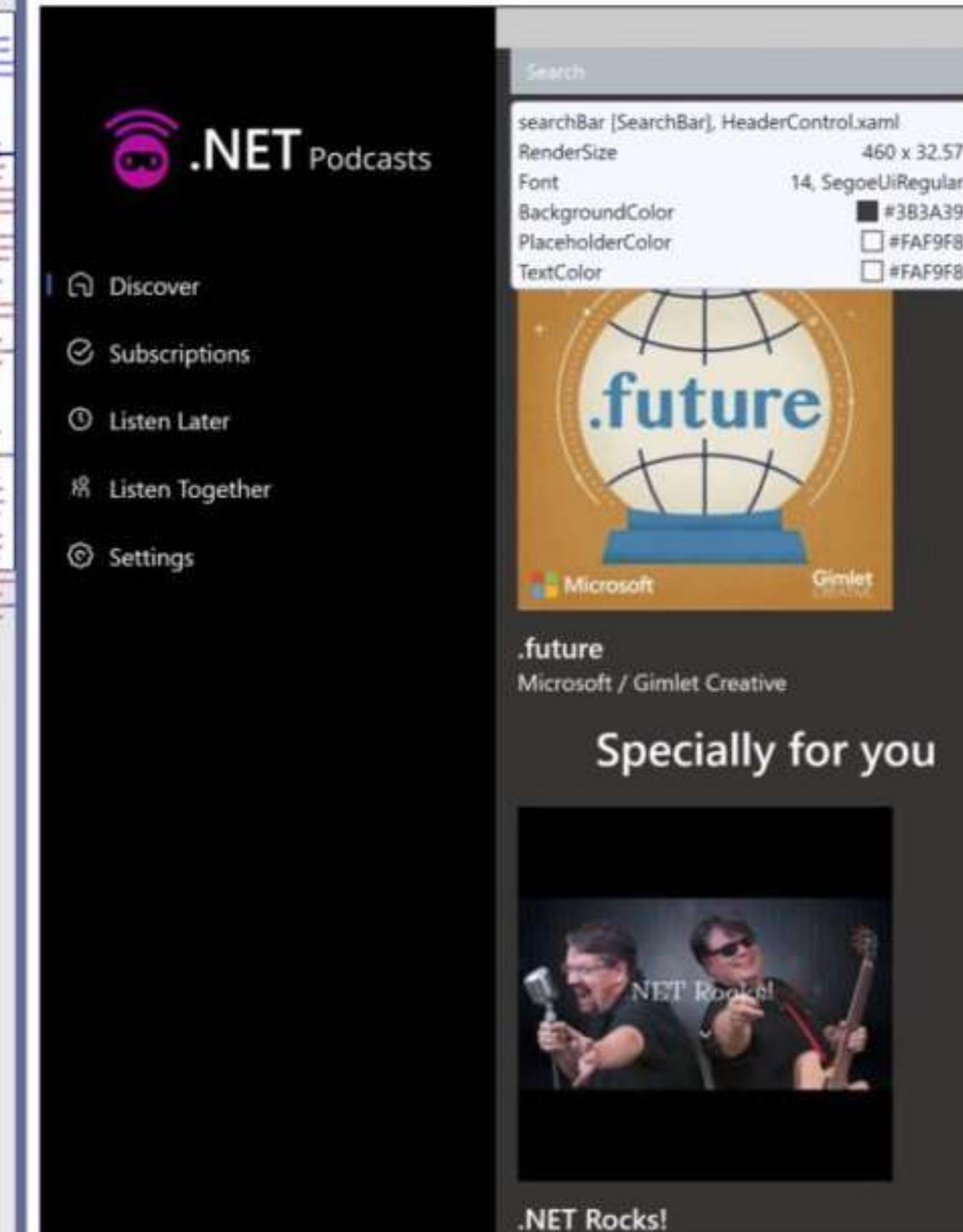
```

1 <Lang="UTF-8"?>
2 <MediaElementView
3 //schemas.microsoft.com/dotnet/2021/maui
4 :p://schemas.microsoft.com/winfx/2009/xaml
5 :lr-namespace:Microsoft.NetConf2021.Maui.Resources.Strings"
6 :resorft.NetConf2021.Maui.Controls.HeaderControl">
7 ...
8 ...
9 <TypeArguments="View">
10 <Form="UWP, MacCatalyst">
11 ...
12 <lowDefinitions="auto, auto">
13 <SearchBar x:Name="searchBar"
14     HorizontalOptions="Start"
15     WidthRequest="460"
16     Text="{Binding TextToSearch, Source={x:Reference selfMed}
17 SearchCommand="{Binding SearchCommand, Source={x:Referenc
18 SemanticProperties.Description="{x:Static res:AppResourc
19 ...
20 <Label Text="{x:Static res:AppResource.See_All_Categories}"
21     Style="{StaticResource BodyLabelStyle}"
22     TextColor="#{StaticResource Primary}"
23     Grid.Row="1"
24     HorizontalOptions="End"
25     Margin="0,0,30,0"
26     SemanticProperties.Description="{x:Static res:AppResource.Se
27     IsVisible="{Binding ShowSearchCategories, Source={x:Referenc
28     FontSize="16"
29     <Label.GestureRecognizers>
30         <TapGestureRecognizer Tapped="TapGestureRecognizer_Tapped"
31     </Label.GestureRecognizers>
32 >/Label>
33 ...
34 ...
35 ...
36 <Form="Android,iOS">
37 <ColumnDefinitions="auto, *"
38     Margin="16,12">
39 <Image Source="{AppThemeBinding Light=logo_header_horizontal.png, Da
40     HeightRequest="34"
41     WidthRequest="125"
42     VerticalOptions="Center"
43     HorizontalOptions="Start" />
44 <Image Source="search.png"
45     Grid.Column="1"
46     VerticalOptions="Center"
47     HorizontalOptions="End"
48     HeightRequest="28"

```

No issues found Miguel Angel Barrera, 92 days ago | 4 authors, 6 changes

Solution Explorer Git Changes Live Property Explorer XAML Live Preview



File Edit Selection View Go Run Terminal ... main.dart - test - Visual Studio ...

No Configuration main.dart

b > main.dart > ...

```

import 'package:flutter/material.dart';
void main() {
    runApp(App());
}

class App extends StatelessWidget {
    Widget build(BuildContext context) {
        return MaterialApp(
            home: Scaffold(
                appBar: AppBar(
                    title: Text('Demo'),
                ), // AppBar
                body: Center(
                    child: ElevatedButton(
                        child: Text('Click me!'),
                        onPressed: () {},
                    ), // ElevatedButton
                ), // Center
            ), // Scaffold
        ); // MaterialApp
    }
}

```

WATCH

CALL STACK RUNNING

BREAKPOINTS

All Exceptions Uncaught Exceptions

1 △ 0 ⚡ 1 ⚡ CMake: [Debug]: Ready No Kit Selected Build [all] ⚡ Run CTest Debug my c

พວກເຮາກຳໃຫ້ນາດີມ ຫ ຂອງລູກຄາ ເປັນ Automation

ພວກເຮາກຳໃຫ້ນາເດີມ ຫຼື ຂອງລູກຄາ ເປັນ Automation

ແລ້ວກຳໄມເຮາໄມລອງດູປຸນໍາເດີມ ຫຼື ໃນຂະໜ່າຍໂປຣແກຣມໃຫ້ມັນແກບຈະວັດໂນມັຕໄດ້ບ້າງລະ ?

เรามาเริ่มจากสิ่งแรกที่
Software Developer ทำกันเลย

บันกิคือการ “เขียนโค้ด”

ប៉ុនកីគីអារ “មើលូគ់” ផ្លូវការណ៍រៀងរាល់

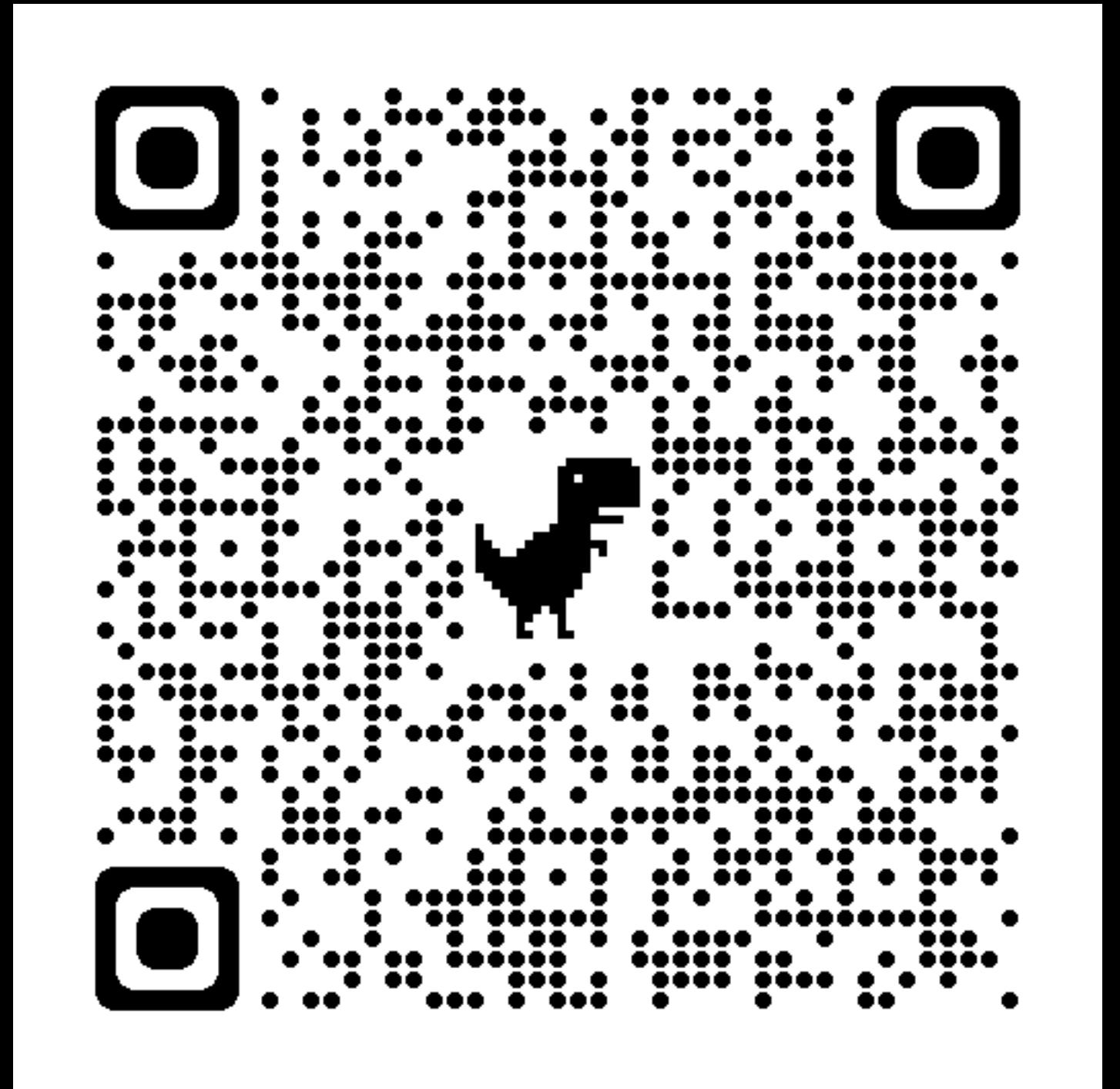
เปลี่ยนรีเมค Visual Studio Code ให้กลายเป็น "สีมงคล"

หมายเหตุ : เป็นความเชื่อส่วนบุคคลเท่านั้น โดยอิงจากสีมงคลประจำวันด้านการเงิน และ การงาน

Netflix Red theme
"สีแดงແວ່ນຈົດ ຍັງກະ Netflix"

some-yellow
"เหลืองແບບນີ້ ກໍາຈະໄຮຖິກໃຫຍ່ແນ່ນອນ"

Pink-Cat-Boo Theme
"ປຸລຸຄວາມຄືຂູນຕົວຄູນ"



เปลี่ยนรีเม **Visual Studio Code** ให้กลายเป็น "สีมงคล"

หมายเหตุ : เป็นความเชื่อส่วนบุคคลเท่านั้น โดยอิงจากสีมงคลประจำวันด้านการเงิน และ การงาน

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Pink-Cat-Boo Theme
"ປຸລຸຄວາມຄືຂູນຕົວຄູນ"

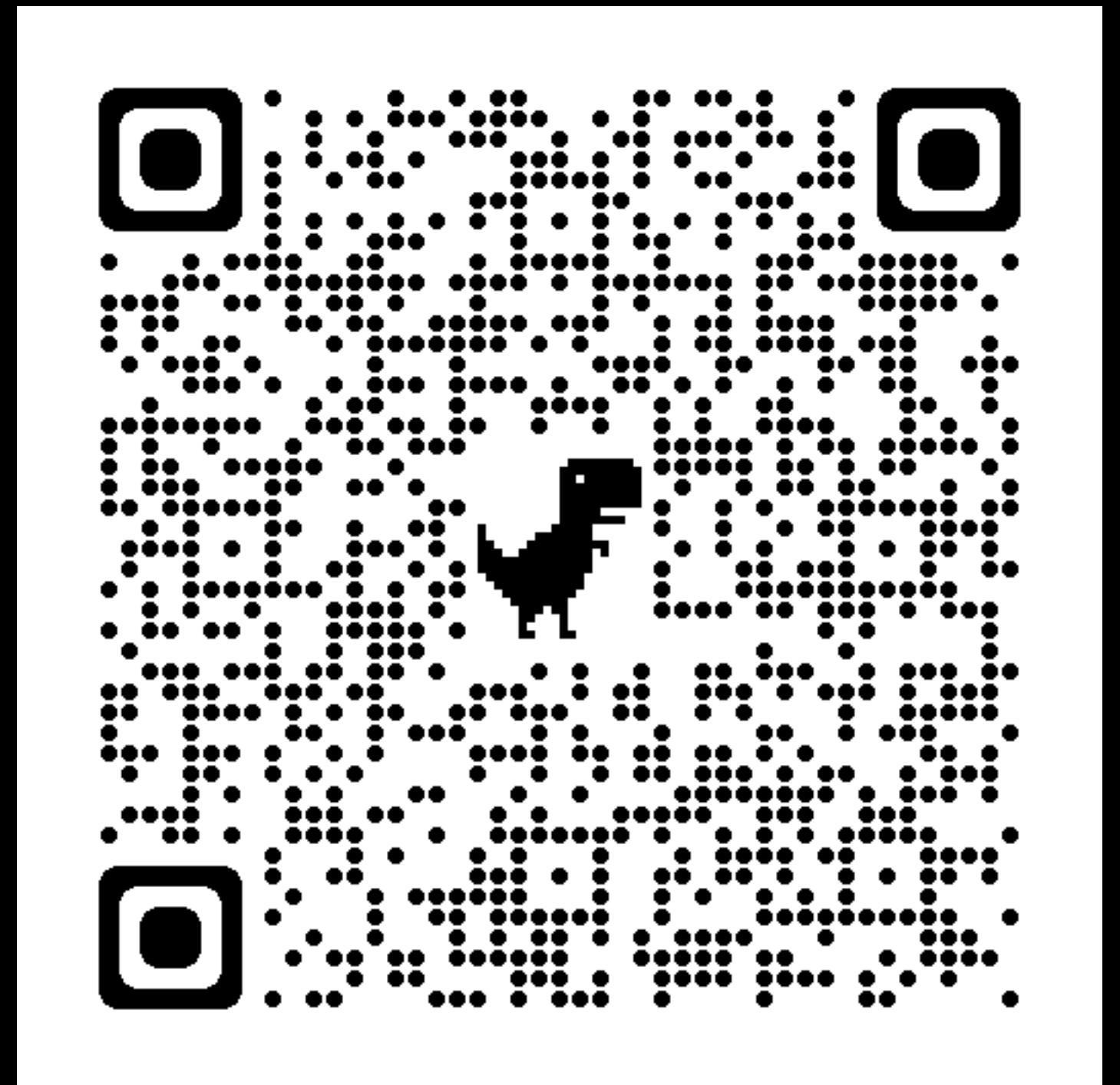
802

ถูกใจ

แสดงความคิดเห็น

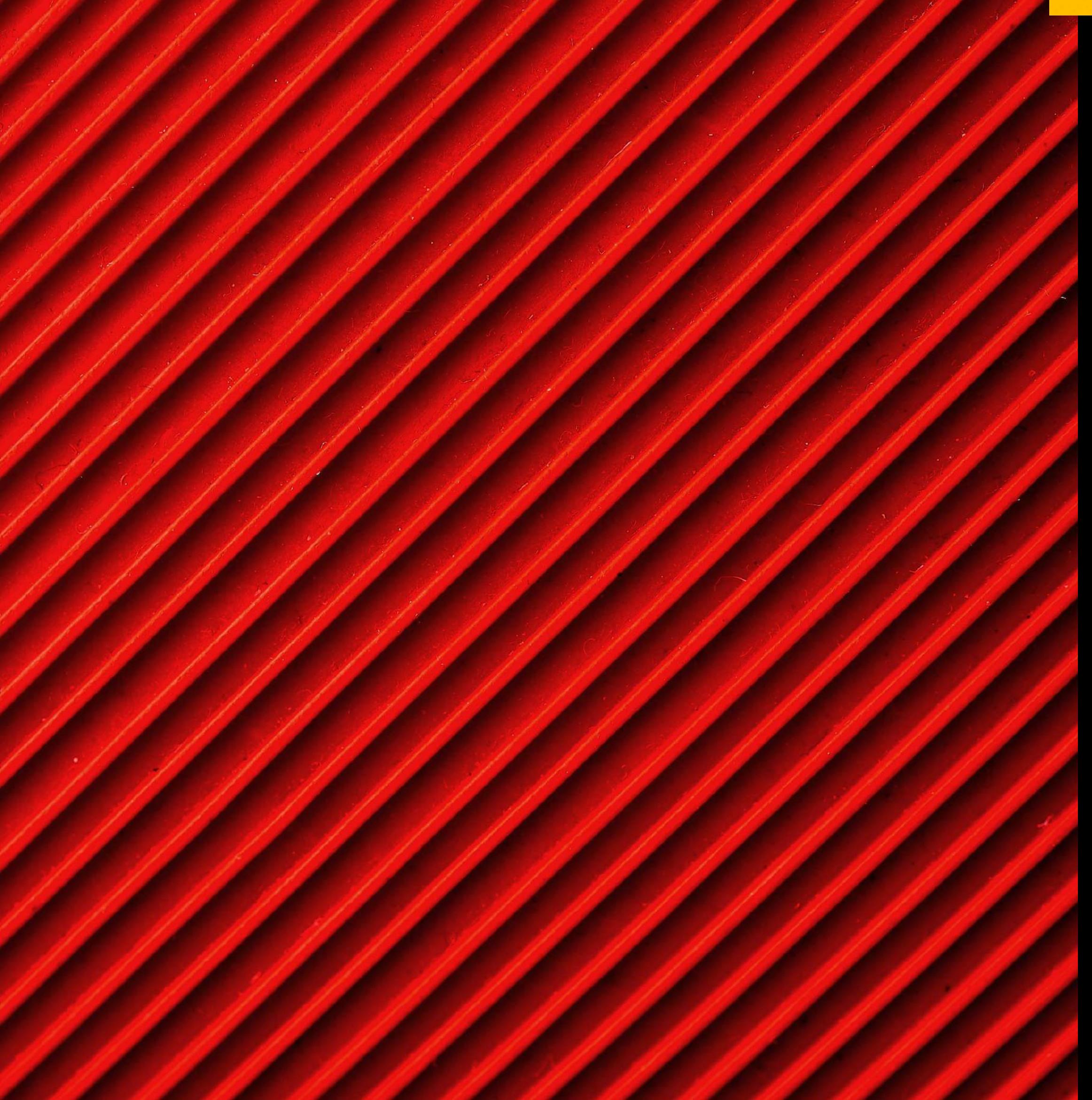
แชร์

ความคิดเห็น 83 รายการ แซร์ 1.9 พัน ครั้ง



ต้องเปลี่ยนรีม Code Editor / IDE
นั้นก็คือการ “เขียนโคด”

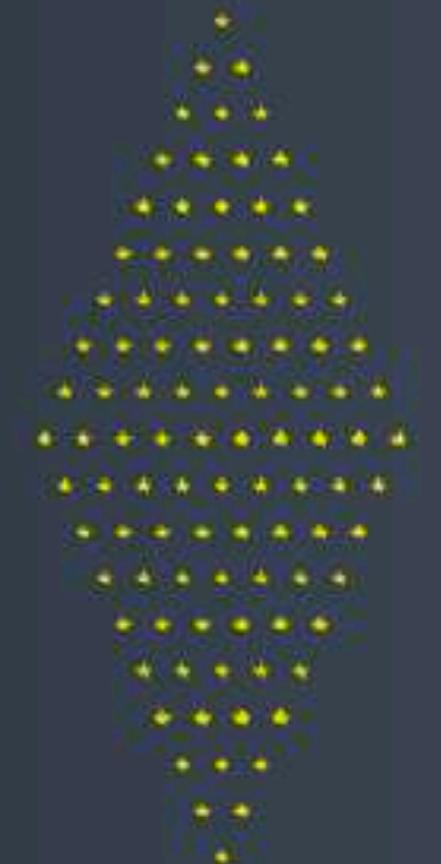
การเขียนโค้ด คือ
“การหา Pattern ของปัญหาเพื่อที่
เราจะทำการแก้ด้วยวิธีการที่ชัดเจน
เพื่อนำไปสู่คำตอบที่ถูกต้อง”



Star Patterns in C



**Inverted Half Star
Pyramid Pattern**



**Full Star Diamond
Pattern**



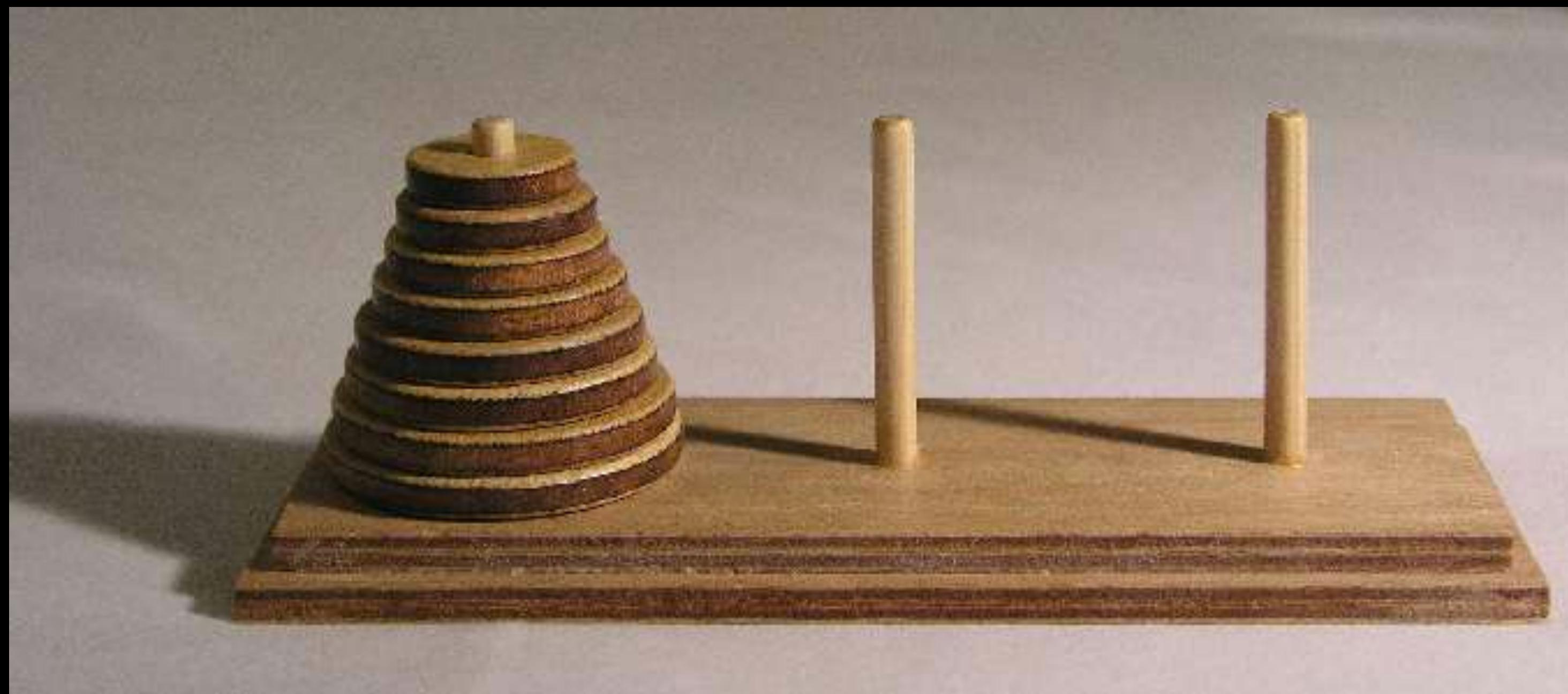
**Star Pyramid
Pattern**

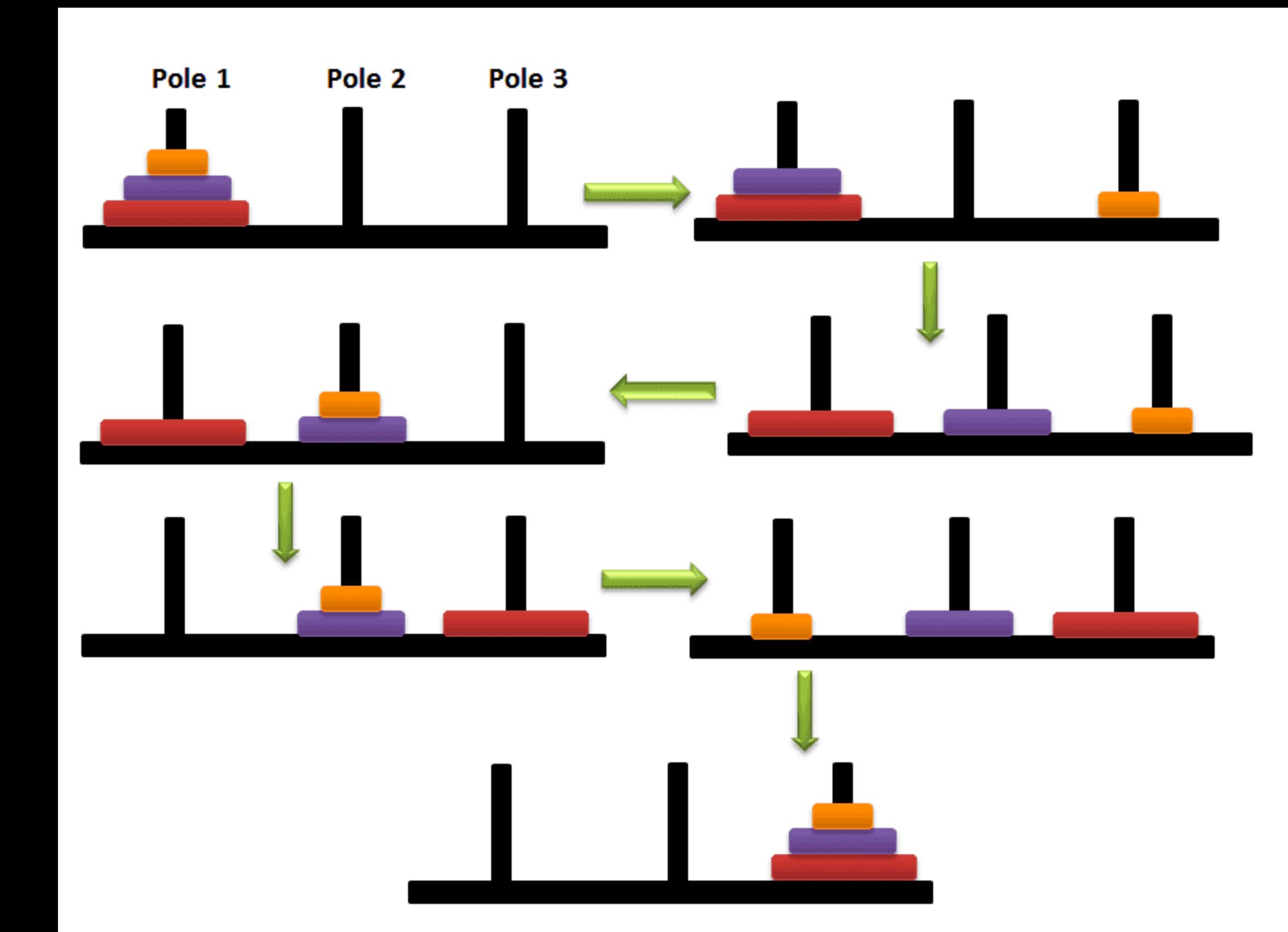
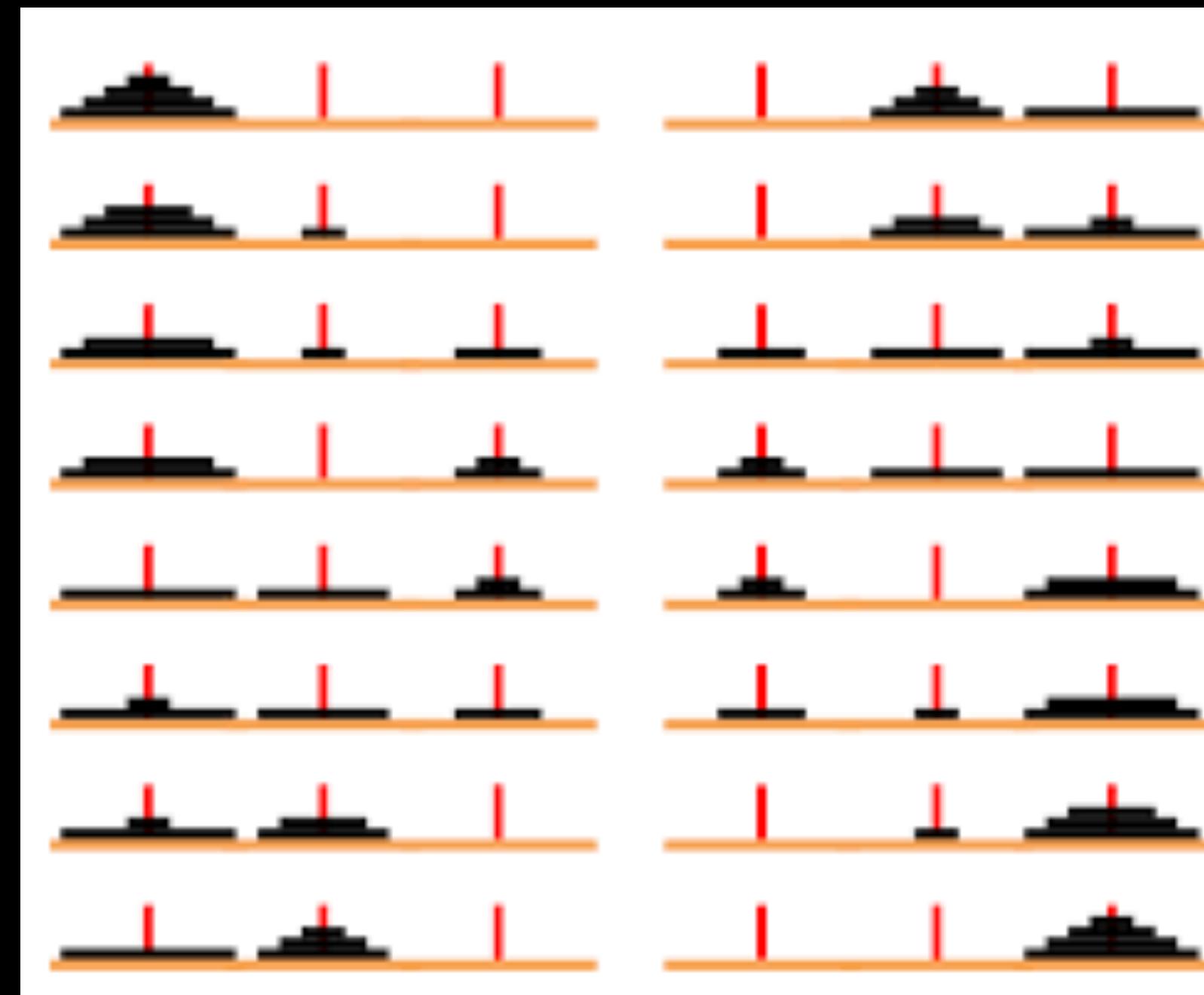
www.educba.com

```
*  
* *  
* * *  
* * * *  
* * * * *  
* * * * * *  
* * * * * * *  
* * * * * * * *  
* * * * * * * * *  
* * * * * * * * * *
```

Enter number of rows: 10

```
*  
* *  
* * *  
* * * *  
* * * * *  
* * * * * *  
* * * * * * *  
* * * * * * * *  
* * * * * * * * *  
* * * * * * * * * *
```

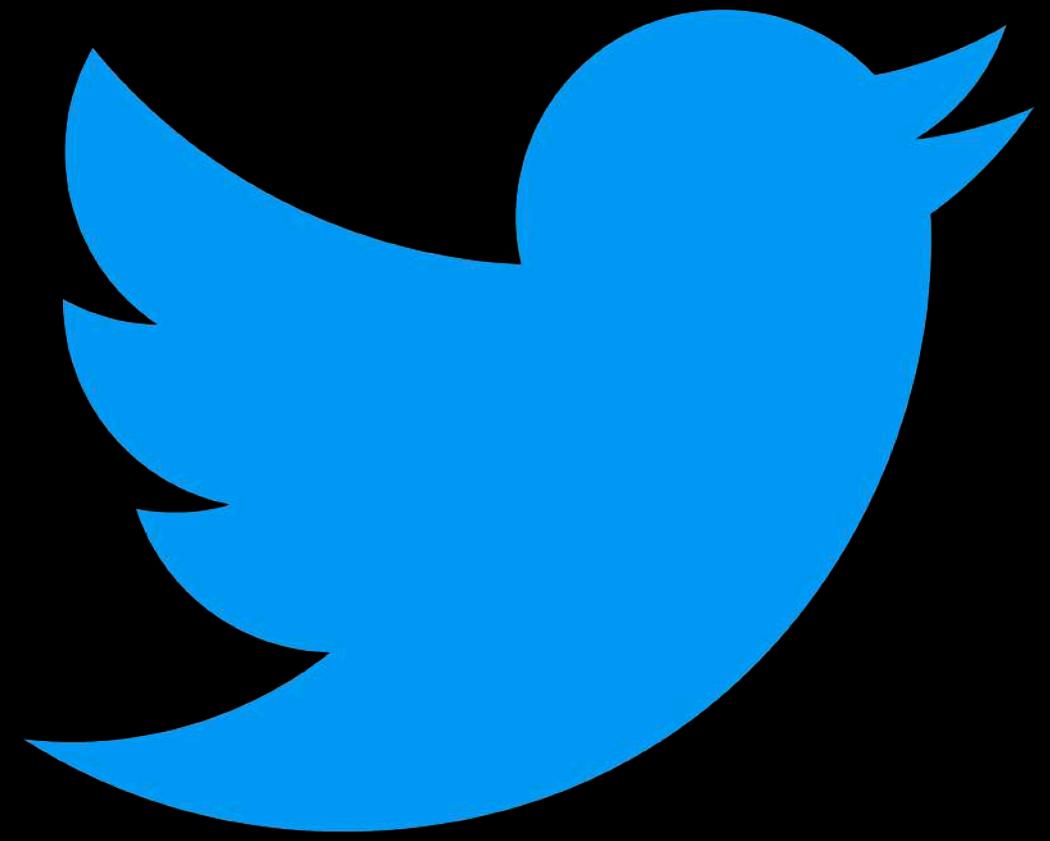


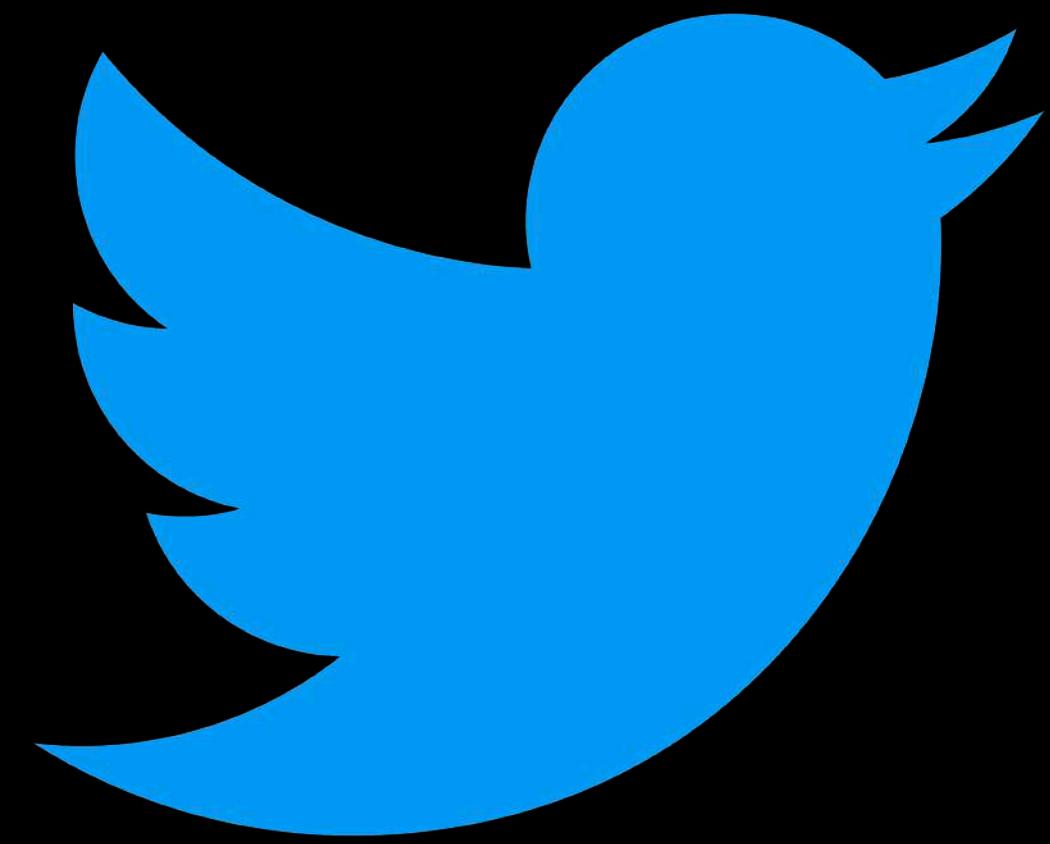


ตราพยากรณ์ Pattern เพื่อแก้ไขปัญหา
ให้ลูกค้า และ อาจารย์ที่สั่งการบ้าน Algorithm Irma

ແຕ່ຮູ້ຂໍ້ໄມ .. ວ່າງານຂອງ Software Dev
ກີ່ມີ Pattern ອະໄສໄຕລ໌ນີ້ອຍຸເຕີມໄປເມດະນະ !







เราจะไปต่อ API กับ Twitter ได้อย่างไร ?

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- Community ▾

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Documentation

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- Fundamentals ▾
- Tools and libraries
- Tutorials
- API reference index

Twitter API

The Twitter API enables programmatic access to Twitter in unique and advanced ways. Tap into core elements of Twitter like: Tweets, Direct Messages, Spaces, Lists, users, and more.

[Sign up](#) [API access levels and versions](#) [Try a live request](#)

Twitter API v2

Twitter API v2 is ready for prime time! We recommend that the majority of developers start to think about migrating to v2 of the API, and for any new users to get started with v2. Why migrate?


New and more detailed data objects


New parameters to request objects and fields


Advanced metrics

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Tutorials

Instructions and examples to help you get started.

Explore a user's Tweets

Learn how to explore a user's Tweets and mentions using the user Tweet timeline and user mention timeline endpoints from the last 7 days.
[View tutorial >](#)

Getting started with R and v2 of the Twitter API

Learn about using R to connect to the user lookup endpoint and how to work with JSON returned from Twitter API v2.
[View tutorial >](#)

Post-processing Twitter data with the Google Cloud Platform

This guide gives a high-level overview on how to ingest Tweets at scale, and "slice and dice" those Tweets via metadata to narrow them down to a specific category, or sub-categories.
[View tutorial >](#)

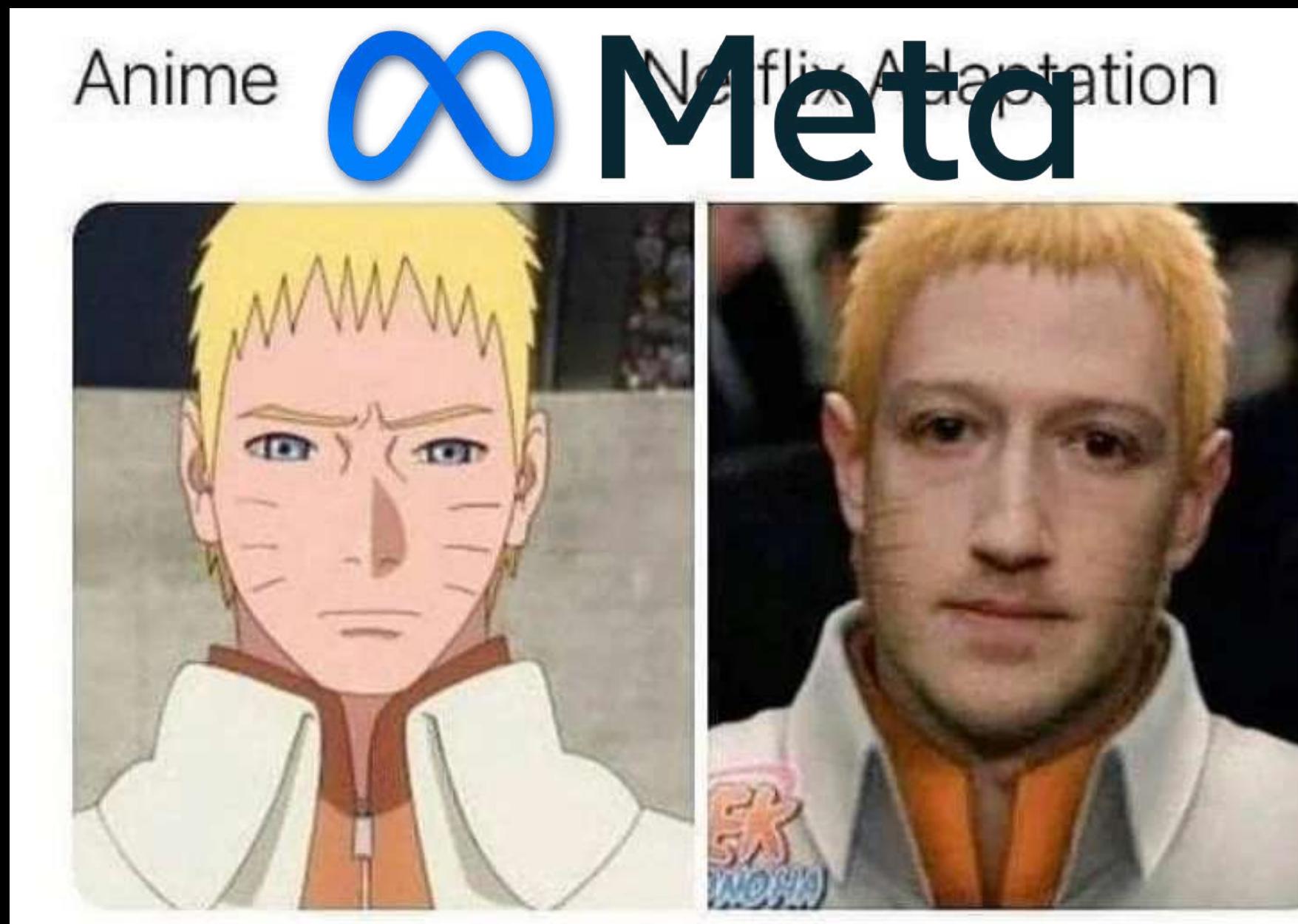
Build a simple customer engagement application

Learn how to build a basic chatbot using webhooks and REST API endpoints.
[View tutorial >](#)

```

1 const Database = require("@replit/database");
2 const express = require("express");
3 const { Client } = require("twitter-api-sdk");
4
5 const port = 3000;
6 const client = new
Client(process.env.BEARER_TOKEN);
7 const db = new Database();
8
9 const server = express();
10
11▼ server.get("/tweets", async (req, res) => {
12   const { from } = req.query;
13   const fromDate = new Date(from);
14   const tweets = (await db.get("tweets")) ||
[];
```





ແລະວິ່ນ ທີ່ອົກມາດຍ

កំពង់គោលាករើយឃុង
ក្នុងទំនាក់ទំនង



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GitHub



2,899,670



★★★★★ (768)

Your AI pair programmer

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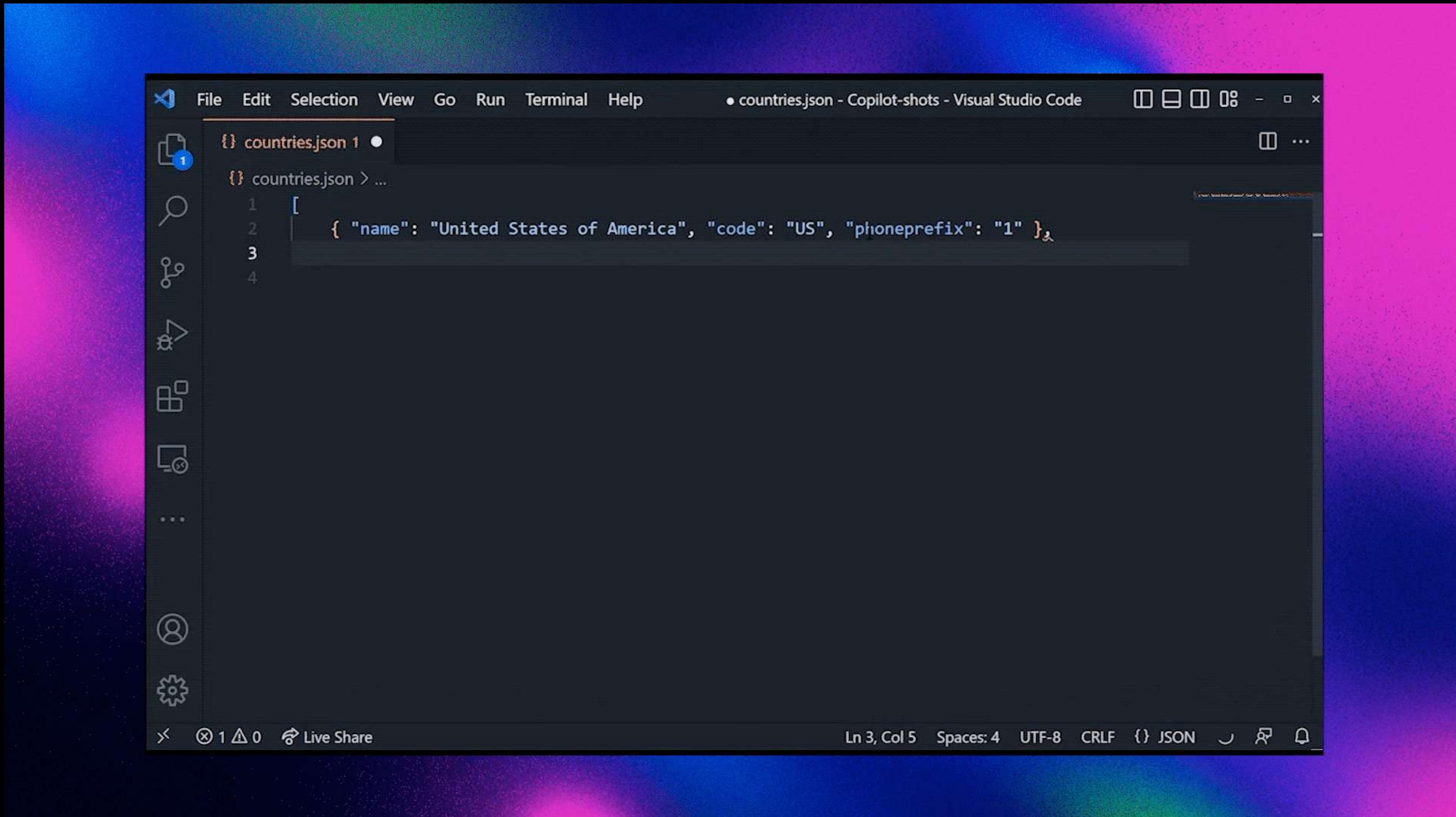


This extension is enabled globally.

```
12
13 func createCategorySummaries(db *sql.DB) ([]CategorySummary, error) {
14     var summaries []CategorySummary
15     rows, err := db.Query("SELECT category, COUNT(category), AVG(value) FROM tasks GROUP BY
```

Business over busy work

GitHub Copilot for business helps you increase developer productivity by 55% with AI-based coding suggestions.



A screenshot of the Visual Studio Code interface. The title bar shows "countries.json - Copilot-shots - Visual Studio Code". The left sidebar has a file icon with a blue circle containing the number "1", indicating one open file. The main editor area displays the following JSON code:

```
[{"name": "United States of America", "code": "US", "phoneprefix": "1"}]
```

The status bar at the bottom shows "Ln 3, Col 5" and "Spaces: 4". Other status bar items include "UTF-8", "CRLF", "JSON", and icons for Live Share, a gear (settings), a person (profile), and notifications.

Quiz : ถ้าเราต้องการหาความหมายจาก String
สักก้อนในโปรแกรม ว่าข้อความในนั้นมีความหมาย
ในแบบ หรือ ลบ ต้องทำยังไง ?

Sentiment Analysis

```
1 #!/usr/bin/env ts-node
2
3 import { fetch } from "fetch-h2";
4
5 // Determine whether the sentiment of text is positive
6 // Use a web service
7 async function isPositive(text: string): Promise<boolean> {
```

```
1 #!/usr/bin/env ts-node
2
3 import { fetch } from "fetch-h2";
4
5 // Determine whether the sentiment of text is positive
6 // Use a web service
7 async function isPositive(text: string): Promise<boolean> {
8   const response = await fetch(`http://text-processing.com/api/sentiment/`, {
9     method: "POST",
10    body: `text=${text}`,
11    headers: {
12      "Content-Type": "application/x-www-form-urlencoded",
13    },
14  });
15  const json = await response.json();
16  return json.label === "pos";
17 }
```

แค่บี้ทุกอย่างก็จบ

The screenshot shows a development setup for a Flutter application named "myapp".

Code Editor: The main window displays the Dart code for `main.dart`. The code includes a `FloatingActionButton` that increments a variable named `money` when pressed.

```
nyapp > lib > main.dart > _MyAppState > build
30     onPressed: () {
31         setState(() {
32             money++;
33         });
34     },
35     tooltip: 'Increment',
36     child: const Icon(Icons.add),
37 ), // FloatingActionButton
38 ), // Scaffold
39 ); // MaterialApp
40 }
41 }
42 }
```

Terminal: The terminal tab shows the output of the Flutter DevTools debugger and profiler. It indicates a hot reload was performed, reloading 1 of 583 libraries in 390ms. It also displays EGL emulation statistics and a Python process named `bash myapp`.

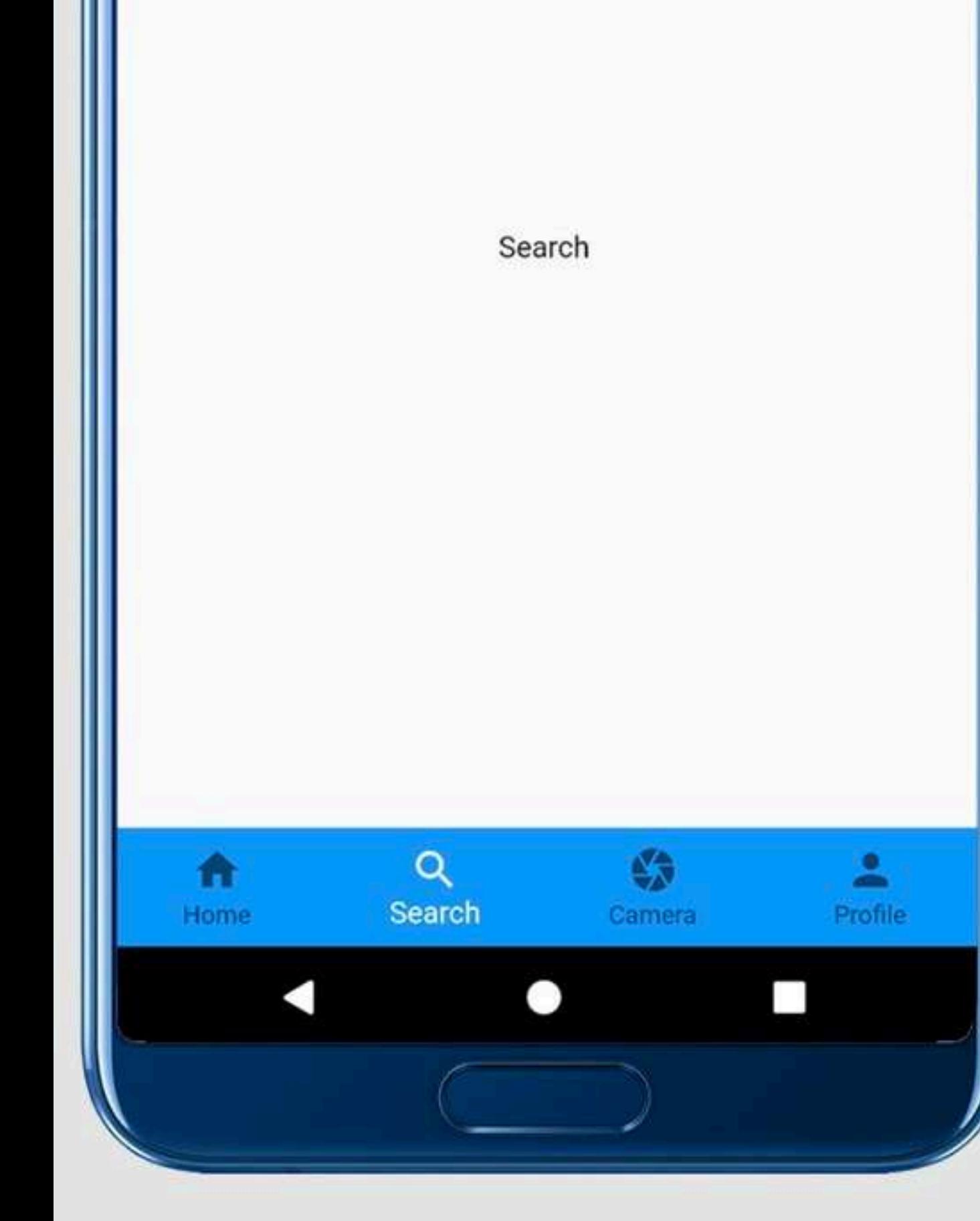
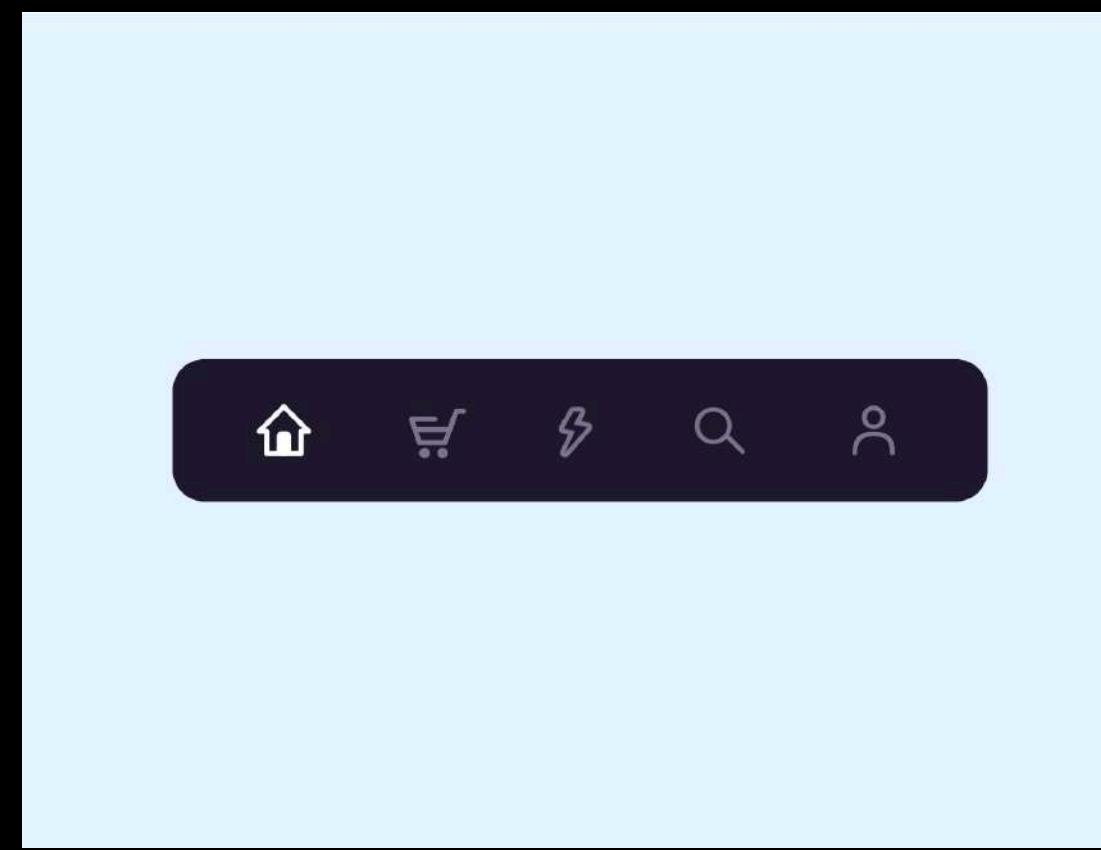
```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
+
The Flutter DevTools debugger and profiler on sdk gphone64 arm64 is available at:
http://127.0.0.1:9101?uri=http://127.0.0.1:50155/TzErT9uCvqI=/
Performing hot reload...
Reloaded 1 of 583 libraries in 390ms.
D/EGL_emulation( 6717): app_time_stats: avg=9532.87ms min=130.52ms max=18935.22ms count=2
Performing hot reload...
Reloaded 0 libraries in 97ms.
D/EGL_emulation( 6717): app_time_stats: avg=3556.61ms min=3556.61ms max=3556.61ms count=1
D/EGL_emulation( 6717): app_time_stats: avg=106923.89ms min=106923.89ms max=106923.89ms count=1
Python
bash myapp
```

Emulator: An Android emulator running on a Pixel 3a API 32 arm64-v8a device is shown. The app's splash screen displays the text "Flutter Demo" and "Hello World! 🎉 I have only, 3 🎉".

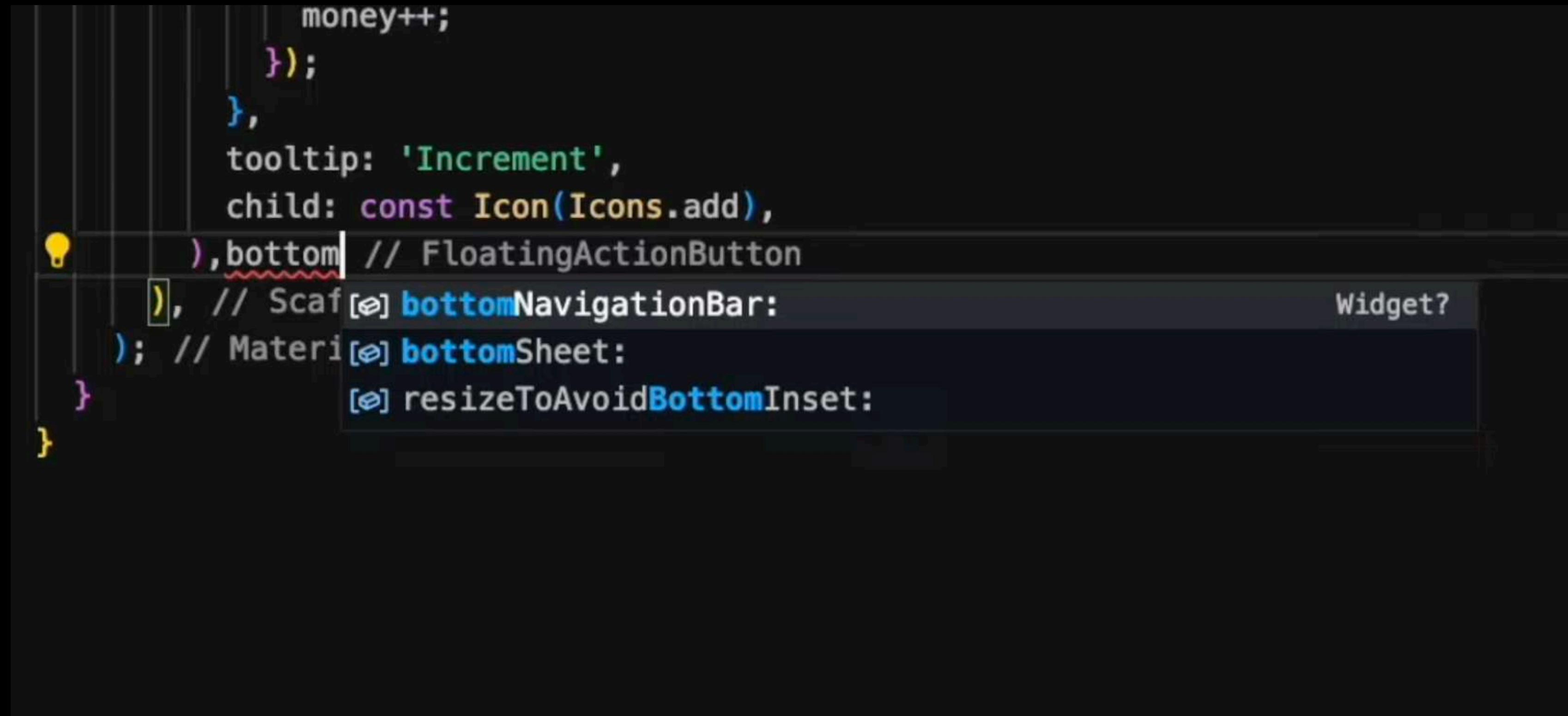
Flutter Demo

Hello World! 🎉 I have only, 3 🎉

Bottom Navigation



Quiz : តារាងណែនាំ Navigation Bar ត្រូវបានកំណត់ឡើង ?



```
    money++;
  });
},
tooltip: 'Increment',
child: const Icon(Icons.add),
), bottom // FloatingActionButton
), // Scaffold bottomNavigationBar:
); // Material bottomSheet:
[Widget?] [Widget?]
[Widget?]
```

แค่เราลองเดาซื้อ หรือ พิมพ์สิ่งที่เราอยากรีดลงไป

EXPLORER

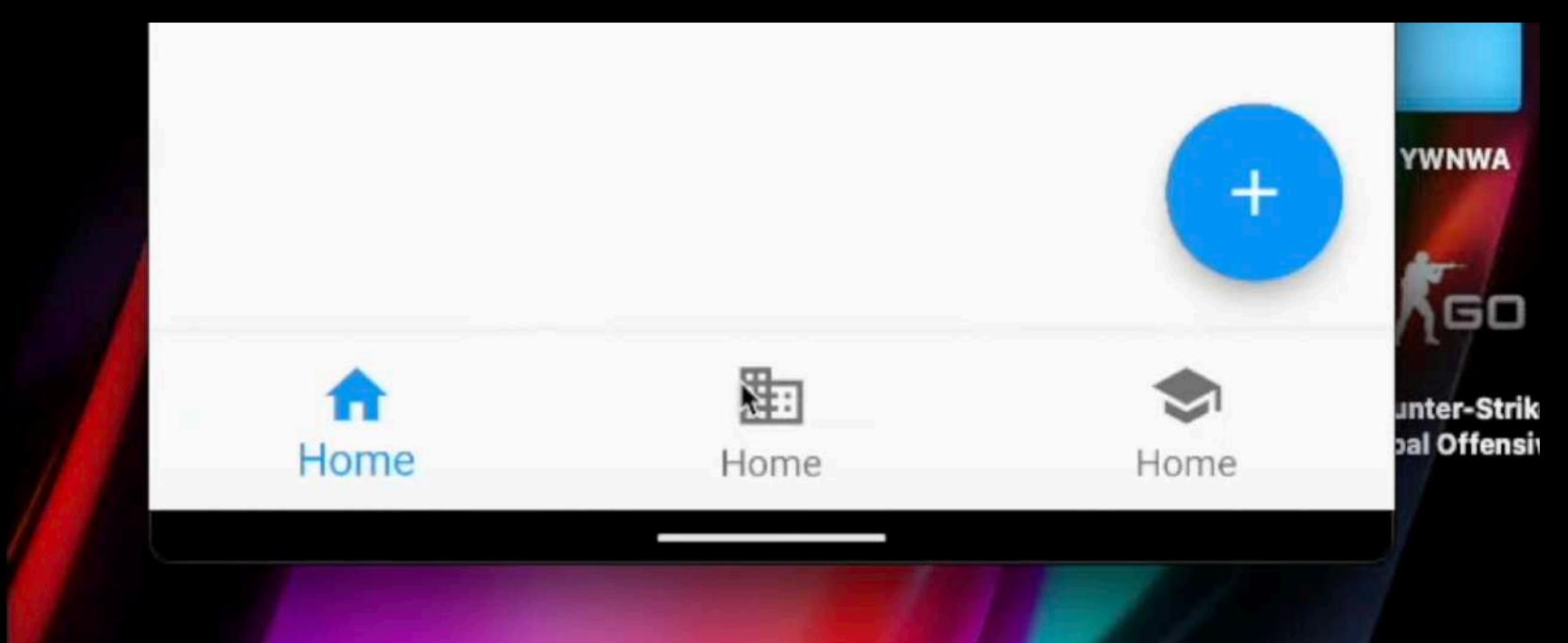
FLUTTER

myapp > lib > main.dart 1

```
myapp > lib > main.dart > _MyAppState > build
23     title: const Text('Flutter Demo'),
24     ), // AppBar
25     body: Container(
26         child: Text('Hello World ! 🎉 I have only, $money ₪'),
27         margin: const EdgeInsets.all(20),
28     ), // Container
29     floatingActionButton: FloatingActionButton(
30         onPressed: () {
31             setState(() {
32                 money++;
33             });
34         },
35         tooltip: 'Increment',
36         child: const Icon(Icons.add),
37     ),bottomNavigationBar: BottomNavigationBar( // FloatingActionButton
items: const <BottomNavigationBarItem>[
    BottomNavigationBarItem(
        icon: Icon(Icons.home),
        title: Text('Home'),
    ),
    BottomNavigationBarItem(
        icon: Icon(Icons.business),
        title: Text('Business'),
    ),
    BottomNavigationBarItem(
        icon: Icon(Icons.school),
        title: Text('Education'),
    )
]
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL

<http://127.0.0.1:50155/TzErT9uCvqI=/>
The Flutter DevTools debugger and profiler on sdk gphone64 arm64 is available at:
<http://127.0.0.1:9101?uri=http://127.0.0.1:50155/TzErT9uCvqI=/>



ຖຸກອຍ່າງກົຈະເວຄນາ

```
Users > kittikornprasertsak > 🐍 co.py > ...
1 #read json file
2 def read_json(file_name):
3     with open(file_name, 'r') as f:
4         data = json.load(f)
5     return data
6
```



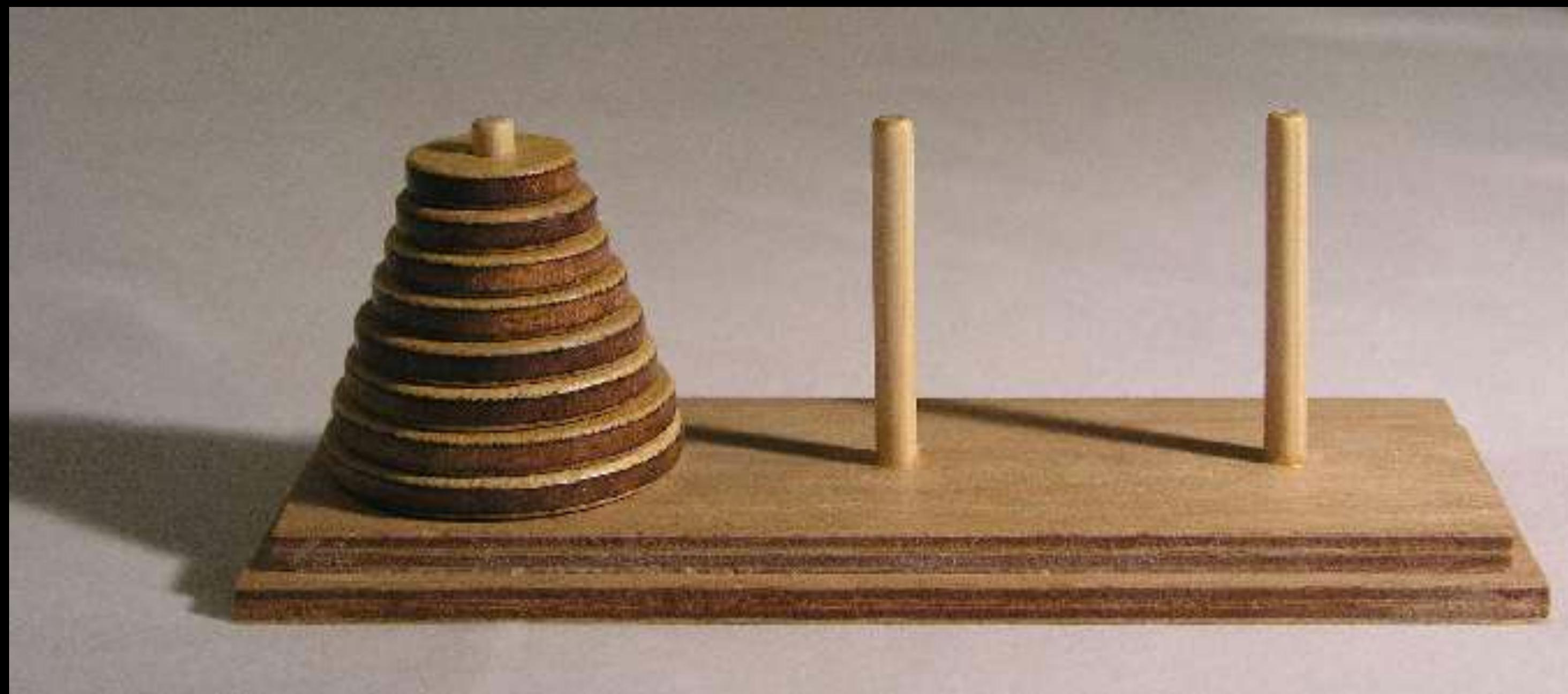
```
1 def factorial():
    if n == 0:
        return 1
    else:
        return n * factorial(n-1)
```

```
1 def factorial():
    if n == 0:
        return 1
    else:
        return n * factorial(n-1)
```

Users > kittikornprasertsak >  copi.py >  grade_calculate

```
1 def grade_calculate(score):
    if score >= 90:
        return 'A'
    elif score >= 80:
        return 'B'
    elif score >= 70:
        return 'C'
    elif score >= 60:
        return 'D'
    else:
        return 'F'
```

```
Users > kittikornprasertsak > 🐍 copi.py > ...
1  def print_pyramid(n):
2      for i in range(1, n + 1):
3          print(' ' * (n - i) + '#' * i)
4
5
```



```
1 def factorial(n):
2     if n == 0:
3         return 1
4     else:
5         return n * factorial(n-1)
```

```
home.html ● {..} test.json

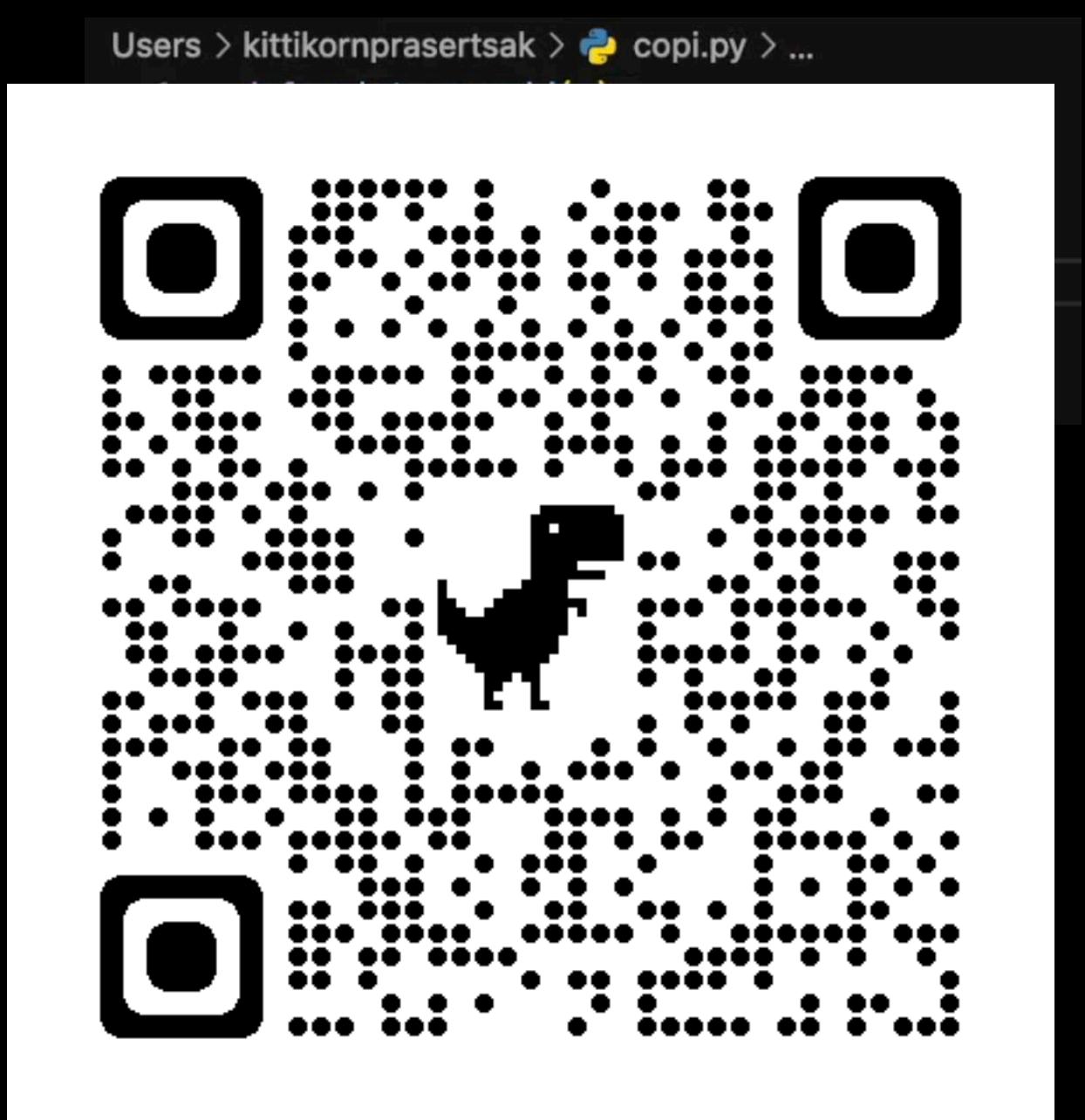
Users > kittikornprasertsak > home.html > body > div.container
  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.2.1/jquery.min.js"></script>
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>
  <link rel="stylesheet" href="css/style.css">

10  </head>
11  <body>
12  <div class="container">
13    <div class="row">
14      <div class="col-sm-12">
15        <h1>Hello World</h1>
16        <p>This is a simple web page.</p>
17      </div>
18    </div>
19
20  <div class="row">
   <div class="col-sm-12">
     <h2>This is a heading</h2>
     <p>This is a paragraph.</p>
   </div>
```



```
Users > kittikornprasertsak > 🐍 copi.py > 📁 grade_calculate
1 def grade_calculate(score):
    if score >= 90:
        return 'A'
    elif score >= 80:
        return 'B'
    elif score >= 70:
        return 'C'
    elif score >= 60:
        return 'D'
    else:
        return 'F'
```

ຈະວຸກມາຈົງ ၅ ນະຄຽບ



仗 Code

មី Code កើយំអុំមី Bug

???

Bug ก็เหมือนความรักแหละ ..

ไม่รู้ว่าเกิดขึ้นตอนไหน

เต็มจอเลย
ซิบพายย...

แต่รู้ตัวอีก ก็เกิดขึ้นมาแล้ว

 devtips2.py

```
1  def grade_calculate(score):
2      if score >= 90:
3          return 'A'
4      elif score >= 80:
5          return 'B'
6      elif score >= 70:
7          return 'C'
8      elif score >= 60:
9          return 'D'
10     else:
11         return 'F'
12
13 grade_calculate("44")
```

Quiz : มาหา Error จากภาพนี้กันครับ

 devtips2.py

```
1  def grade_calculate(score):
2      if score >= 90:
3          return 'A'
4      elif score >= 80:
5          return 'B'
6      elif score >= 70:
7          return 'C'
8      elif score >= 60:
9          return 'D'
10     else:
11         return 'F'
12
13 grade_calculate("44")
```

```
✗ Kittikorns-MacBook-Pro:GithubforDevelopers kittikornprasertsak$ python3 devtips2.py
Traceback (most recent call last):
  File "/Users/kittikornprasertsak/Documents/GitHub/GithubforDevelopers/devtips2.py", line 13, in <module>
    grade_calculate("44")
  File "/Users/kittikornprasertsak/Documents/GitHub/GithubforDevelopers/devtips2.py", line 2, in grade_calculate
    if score >= 90:
TypeError: '>=' not supported between instances of 'str' and 'int'
○ Kittikorns-MacBook-Pro:GithubforDevelopers kittikornprasertsak$
```

Quiz : มากกๆ Error จากการพิมพ์กันครับ



GitHub Copilot Labs v0.4.488

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This extension is enabled globally.

GitHub Copilot Labs v0.4.488

GitHub | 96,412 | ★★★★★(5)



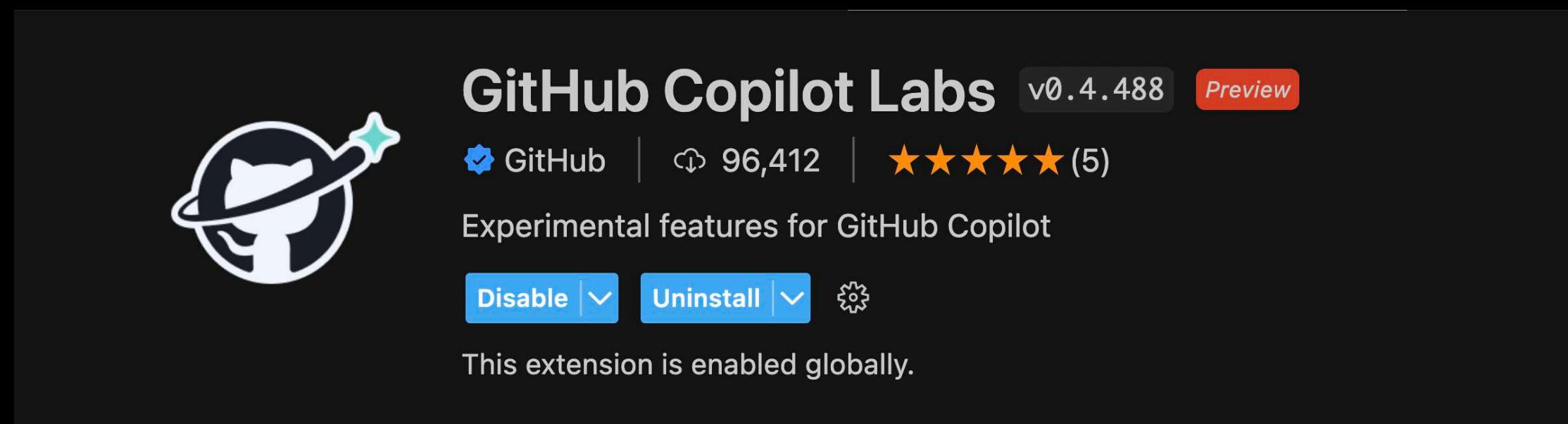
Experimental features for GitHub Copilot

Disable ▾

Uninstall ▾



This extension is enabled globally.



```
devtips2.py
1 def grade_calculate(score):
2     if score >= 90:
3         return 'A'
4     elif score >= 80:
5         return 'B'
6     elif score >= 70:
7         return 'C'
8     elif score >= 60:
9         return 'D'
10    else:
11        return 'F'
12
13 grade_calculate("44")
```

GitHub Copilot Labs v0.4.488 Preview



GitHub | 96,412 | ★★★★★(5)

Experimental features for GitHub Copilot

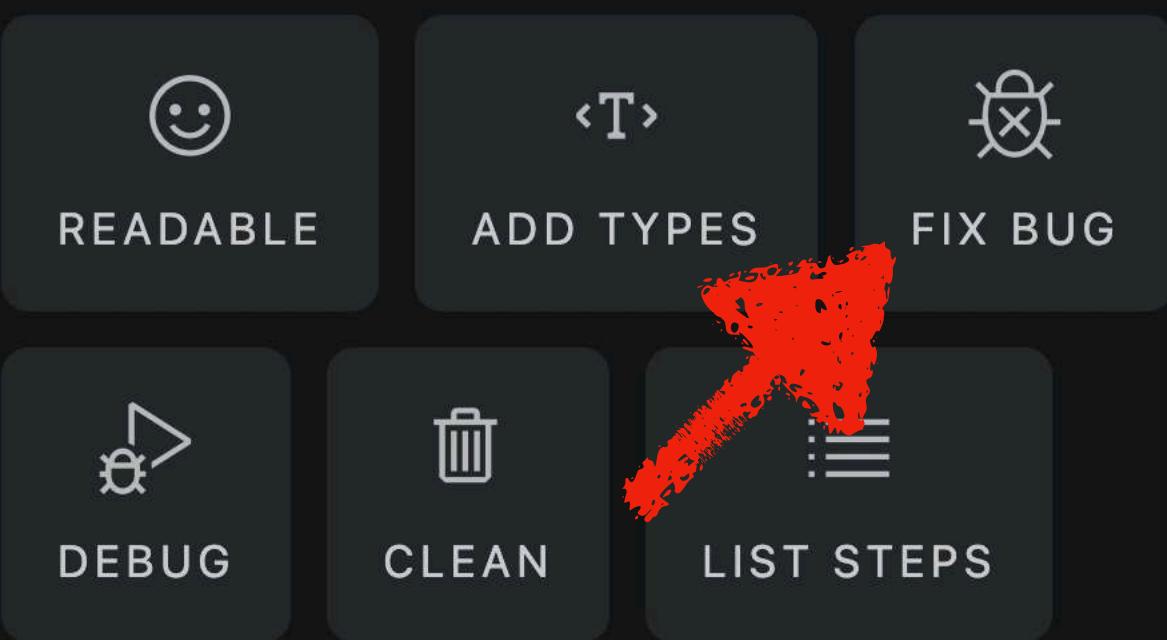
[Disable](#) [Uninstall](#) [⚙️](#)

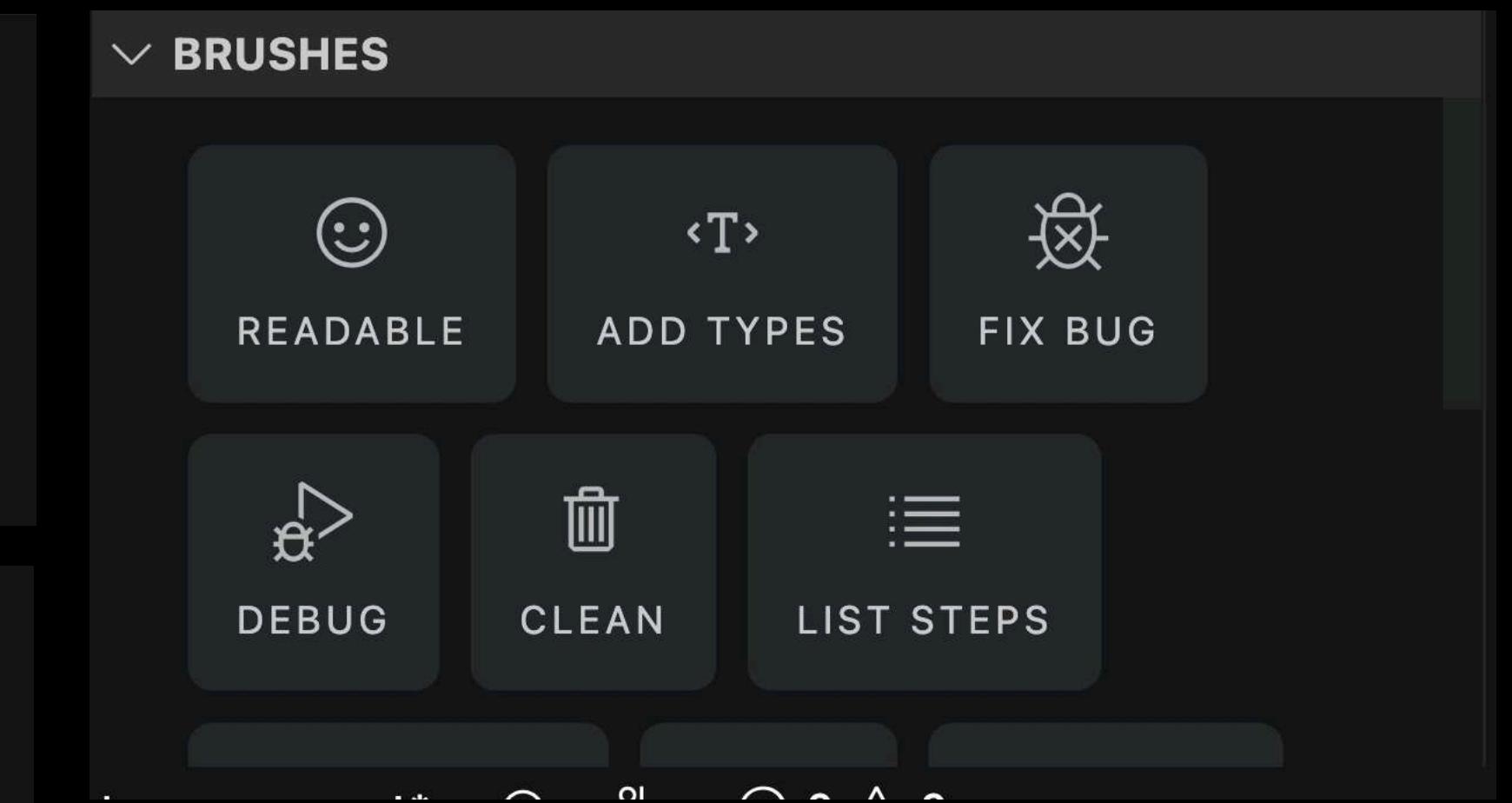
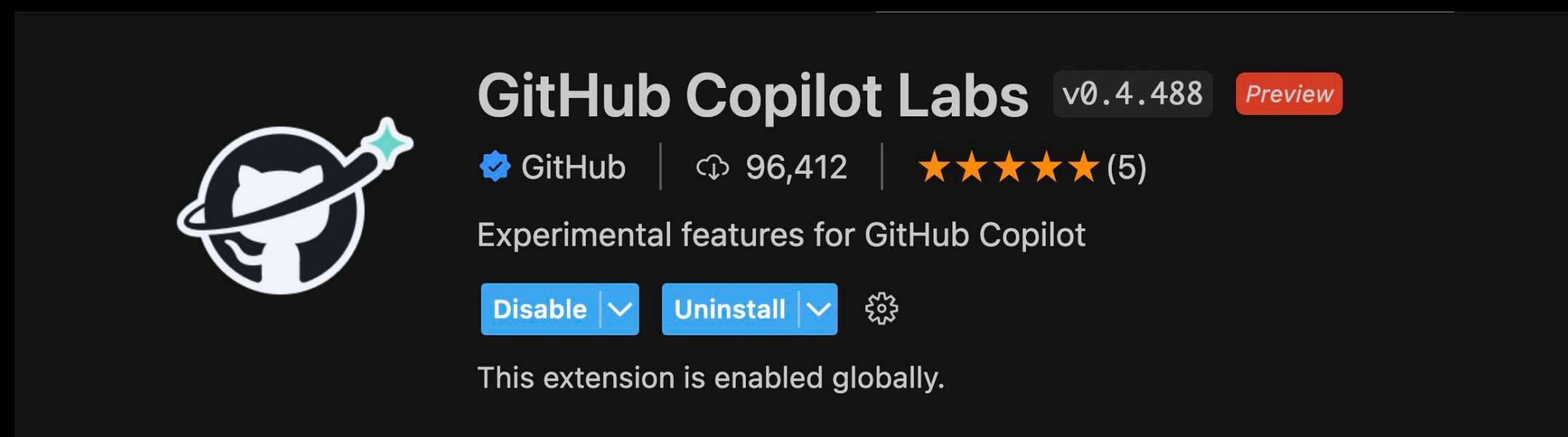
This extension is enabled globally.

devtips2.py

```
1 def grade_calculate(score):
2     if score >= 90:
3         return 'A'
4     elif score >= 80:
5         return 'B'
6     elif score >= 70:
7         return 'C'
8     elif score >= 60:
9         return 'D'
10    else:
11        return 'F'
12
13 grade_calculate("44")
```

BRUSHES





devtips2.py

```
1 def grade_calculate(score):
2     if score >= 90:
3         return 'A'
4     elif score >= 80:
5         return 'B'
6     elif score >= 70:
7         return 'C'
8     elif score >= 60:
9         return 'D'
10    else:
11        return 'F'
12
13 grade_calculate("44")
```

devtips2.py

```
1 def grade_calculate(score):
2     if score >= 90:
3         return 'A'
4     elif score >= 80:
5         return 'B'
6     elif score >= 70:
7         return 'C'
8     elif score >= 60:
9         return 'D'
10    else:
11        return 'F'
12
13 grade_calculate(44)
```

```
24     def star():
25         print("*****")
26         print("*****")
27         print("*****")
28         print("*****")
29         print("*****")
30         print("*****")
31         print("*****")
32         print("*****")
33         print("*****")
```

Quiz : มาหา Error จากภาพนี้กันครับ

```
24 def star():
25     print("*****")
26     print("*****")
27     print("*****")
28     print("*****")
29     | print("*****")
30     print("*****")
31     print("*****")
32     print("*****")
33     print("*****")
```

```
24 ⌘ def star():
25     ...
26     ...
27     ...
28     ...
29     ...
30     ...
31     ...
32     ...
33     ...
34     ...
```

Quiz : มาหา Error จากภาพนี้กันครับ

 devtips2-2.py

```
1  def grade_calculate(score):
2      if score >= 90:
3          return 'A'
4      elif score >= 80:
5          return 'B'
6      elif score >= 70:
7          return 'C'
8      elif score >= 60:
9          return 'D'
10     else:
11         return 'F'
12
13 grade_calculate(44)
```

Quiz : มากกๆ Error จากการพิมพ์กันครับ

ເນື້ອ Code ໄປສັກພັກ

ເນື້ອ Code ໄປສັກພັກ
ກີ່ເຮັ່ມ ກົງ ວາເຊີຍນວະໄຮລງໄປ

เมื่อผนงสร้างตัวแปร แล้วไม่เคยใช้งานมันสักครั้งหนึ่ง



▽ EXPLAIN

```
def grade_calculate(score):
    if score >= 90:
        return 'A'
    elif score >= 80:
        return 'B'
    elif score >= 70:
        return 'C'
    elif score >= 60:
        return 'D'
```

▽ EXPLAIN

Explain code

▶ Advanced

 Ask Copilot

RESULT

""" Here is the explanation for the code above:

1. The function is called grade_calculate and it has one parameter called score.
2. In the function, there are five conditions that will be checked. If a condition is true, it will return a corresponding string.
3. The function will return the result of the condition that is true.
4. The function is called and the argument 44 is passed to the function.
5. The function checks the condition score ≥ 90 . Since it is false, it will not return anything.
6. The function checks the condition score ≥ 80 . Since it is false, it will not return anything.
7. The function checks the condition score ≥ 70 . Since it is false, it will not return anything.
8. The function checks the condition score ≥ 60 . Since it is false, it will not return anything.
9. The function checks the condition score ≥ 50 . Since it is true, it will return 'F'.
10. The function returns 'F'.
11. The function is finished and the result 'F' is returned to the function call.
12. The result 'F' is printed to the console. """

RESULT

""" Here is the explanation for the code above:

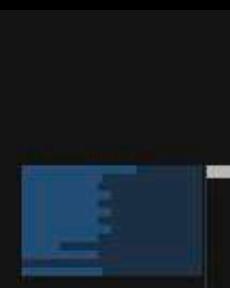
1. The function is called grade_calculate and it has one parameter called score.
2. In the function, there are five conditions that will be checked. If a condition is true, it will return a corresponding string.
3. The function will return the result of the condition that is true.
4. The function is called and the argument 44 is passed to the function.
5. The function checks the condition score ≥ 90 . Since it is false, it will not return anything.
6. The function checks the condition score ≥ 80 . Since it is false, it will not return anything.
7. The function checks the condition score ≥ 70 . Since it is false, it will not return anything.
8. The function checks the condition score ≥ 60 . Since it is false, it will not return anything.
9. The function checks the condition score ≥ 50 . Since it is true, it will return 'F'.
10. The function returns 'F'.
11. The function is finished and the result 'F' is returned to the function call.
12. The result 'F' is printed to the console. """

🐍 devtips2.py

```
1 def grade_calculate(score):  
2     if score >= 90:  
3         return 'A'  
4     elif score >= 80:  
5         return 'B'  
6     elif score >= 70:  
7         return 'C'  
8     elif score >= 60:  
9         return 'D'  
10    else:  
11        return 'F'  
12  
13 grade_calculate(44)
```

devtips2-3.py

```
1  def grade_calculate(score):
2      if score >= 90:
3          return 'A'
4      elif score >= 80:
5          return 'B'
6      elif score >= 70:
7          return 'C'
8      elif score >= 60:
9          return 'D'
10     else:
11         return 'F'
12
13 grade_calculate(88)
14
```



▼ EXPLAIN

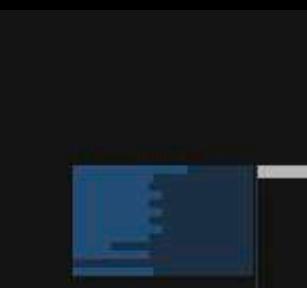
Explain code

► Advanced

Ask Copilot

 devtips2-3.py

```
1  def grade_calculate(score):
2      if score >= 90:
3          return 'A'
4      elif score >= 80:
5          return 'B'
6      elif score >= 70:
7          return 'C'
8      elif score >= 60:
9          return 'D'
10     else:
11         return 'F'
12
13 grade_calculate(88)
14
```



RESULT

""" Here is the explanation for the code above:

1. We define a function called grade_calculate that takes one parameter called score.
2. We use if-elif-else statements to determine the grade, and return the grade if the condition is true.
3. We call the function grade_calculate with the parameter 88. The result is 'B'. """

พอยต์ที่เราสนใจ
พอยต์ที่เราสนใจ

พอย่างกับ Code ที่เราสร้าง
ก็ไม่อยากให้เพื่อนที่เขียนต่อเราด้วย



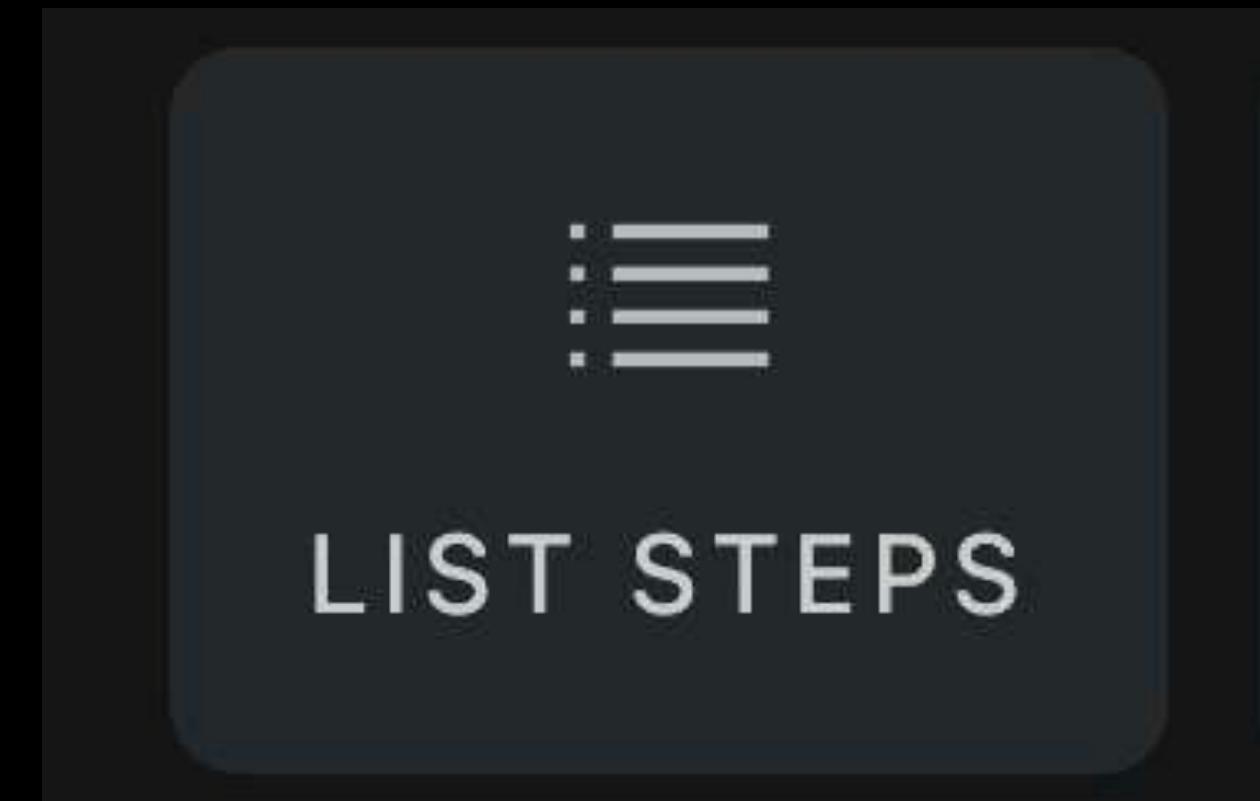
GitHub Copilot Labs v0.4.488

GitHub | 96,412 | ★★★★★(5)

Experimental features for GitHub Copilot

[Disable](#) | [Uninstall](#) | [⚙️](#)

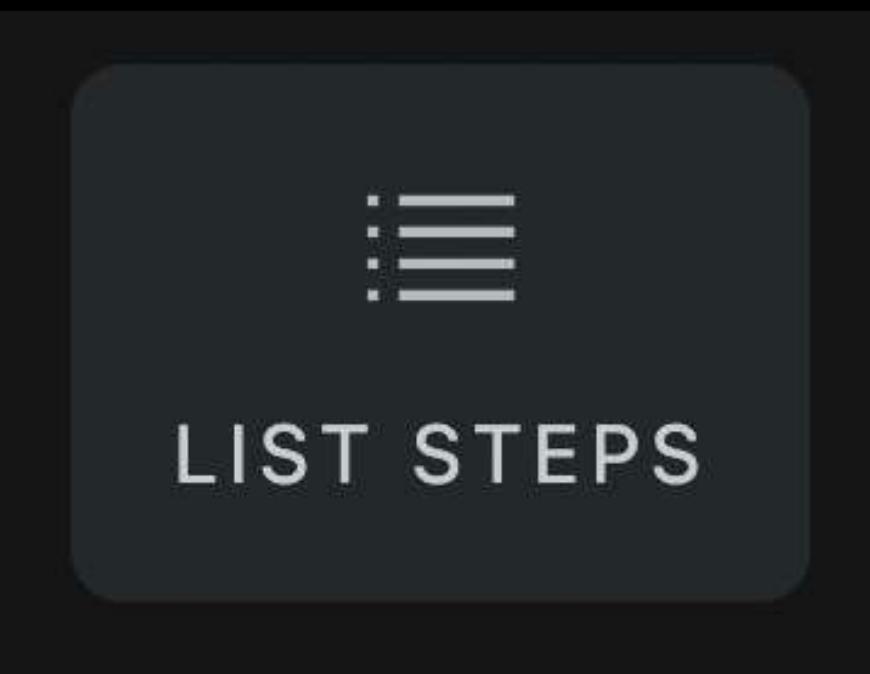
This extension is enabled globally.



 devtips2-3.py

```
1  def calculate_grade(score):
2      if score >= 90:
3          return 'A'
4      elif score >= 80:
5          return 'B'
6      elif score >= 70:
7          return 'C'
8      elif score >= 60:
9          return 'D'
10     else:
11         return 'F'
12
13 print("Calculating grade for marks: 88")
14 print(calculate_grade(88))
15
```

```
devtips2-3.py
1 def calculate_grade(score):
2     if score >= 90:
3         return 'A'
4     elif score >= 80:
5         return 'B'
6     elif score >= 70:
7         return 'C'
8     elif score >= 60:
9         return 'D'
10    else:
11        return 'F'
12
13 print("Calculating grade for marks: 88")
14 print(calculate_grade(88))
```



 devtips2-3.py

```
1  def calculate_grade(score):
2      '''if the score is greater than or equal to 90, return 'A'
3      if score >= 90:
4          return 'A'
5      '''if the score is greater than or equal to 80, return 'B'
6      elif score >= 80:
7          return 'B'
8      '''if the score is greater than or equal to 70, return 'C'
9      elif score >= 70:
10         return 'C'
11     '''if the score is greater than or equal to 60, return 'D'
12     elif score >= 60:
13         return 'D'
14     '''if the score is less than 60, return 'F'
15     else:
16         return 'F'
```



LIST STEPS

พ่อได้คำอธิบายขนาดนี้

ພວໄດគាំវិបាយបាណន័
នូវរូស់ក្រោមឱ្យខ្លះឲ្យ ឯកតានៅក្នុង Docs

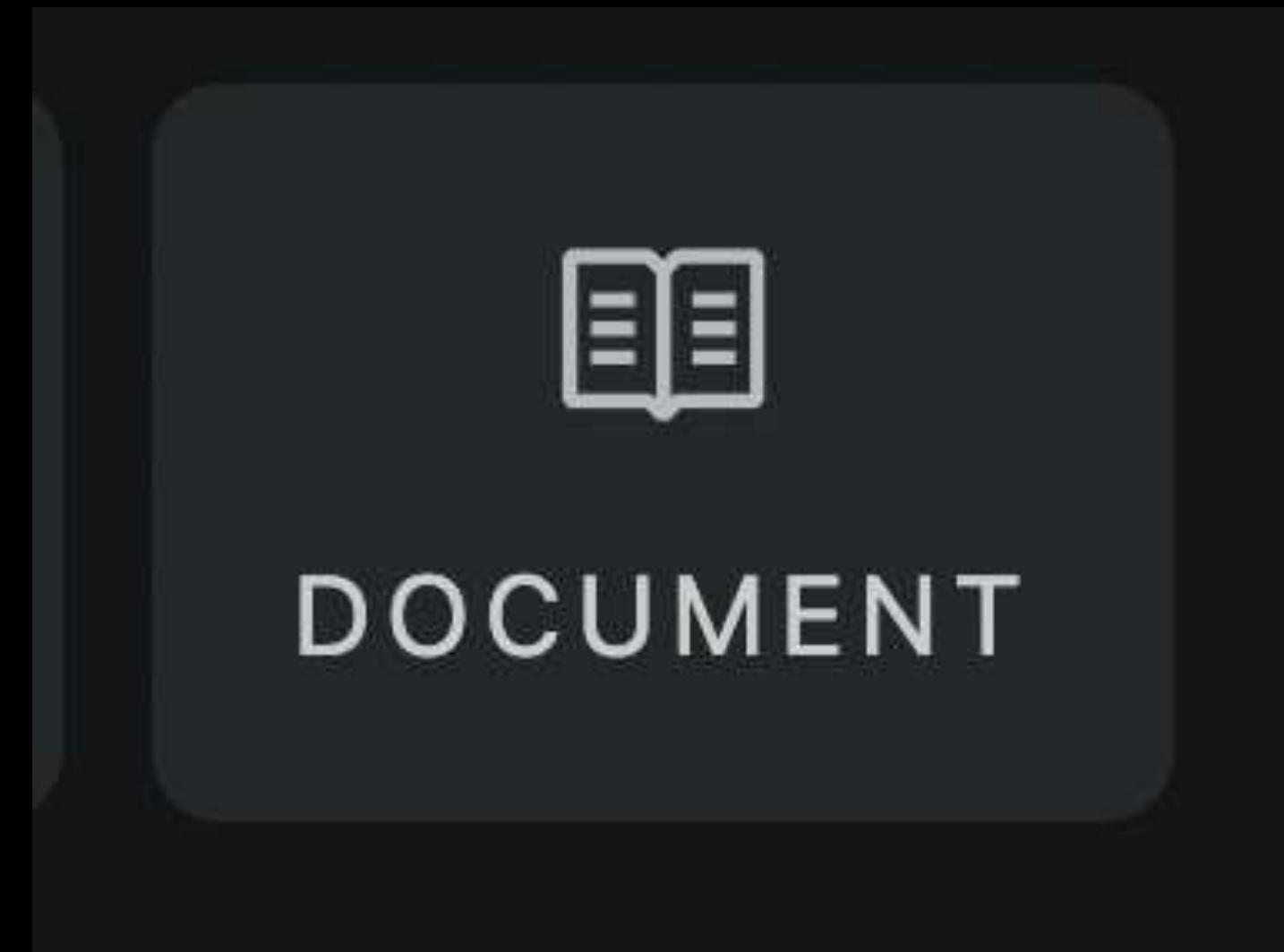
 GitHub Copilot Labs v0.4.488 Preview

GitHub | 96,412 | ★★★★★ (5)

Experimental features for GitHub Copilot

[Disable](#) | [Uninstall](#) | 

This extension is enabled globally.



devtips2-3.py

```
1 def calculate_grade(score):
2     if score >= 90:
3         return 'A'
4     elif score >= 80:
```



DOCUMENT



DOCUMENT

```
1  def calculate_grade(score):
2      """Calculates the letter grade from the given score.
3
4      Args:
5          score (int): The score to be converted to a letter grade.
6
7      Returns:
8          str: The letter grade corresponding to the given score.
9      """
10     if score >= 90:
11         return 'A'
12     elif score >= 80:
13         return 'B'
14     elif score >= 70:
15         return 'C'
16     elif score >= 60:
17         return 'D'
18     else:
19         return 'F'
20
21 print("Calculating grade for marks: 88")
22 print(calculate_grade(88))
```

ພວເຂົມໄປເຍວະ ၅

ພວເຂົຍນໄປເຍວະ ၅
ໂຄດແມ່ນເຮື່ມແລະທະໄປກັນໃຫຍ່

```
24 def star():
25     print("*****")
26     print("*****")
27     print("*****")
28     print("*****")
29     print("*****")
30     print("*****")
31     print("*****")
32     print("*****")
33     print("*****")
```



READABLE

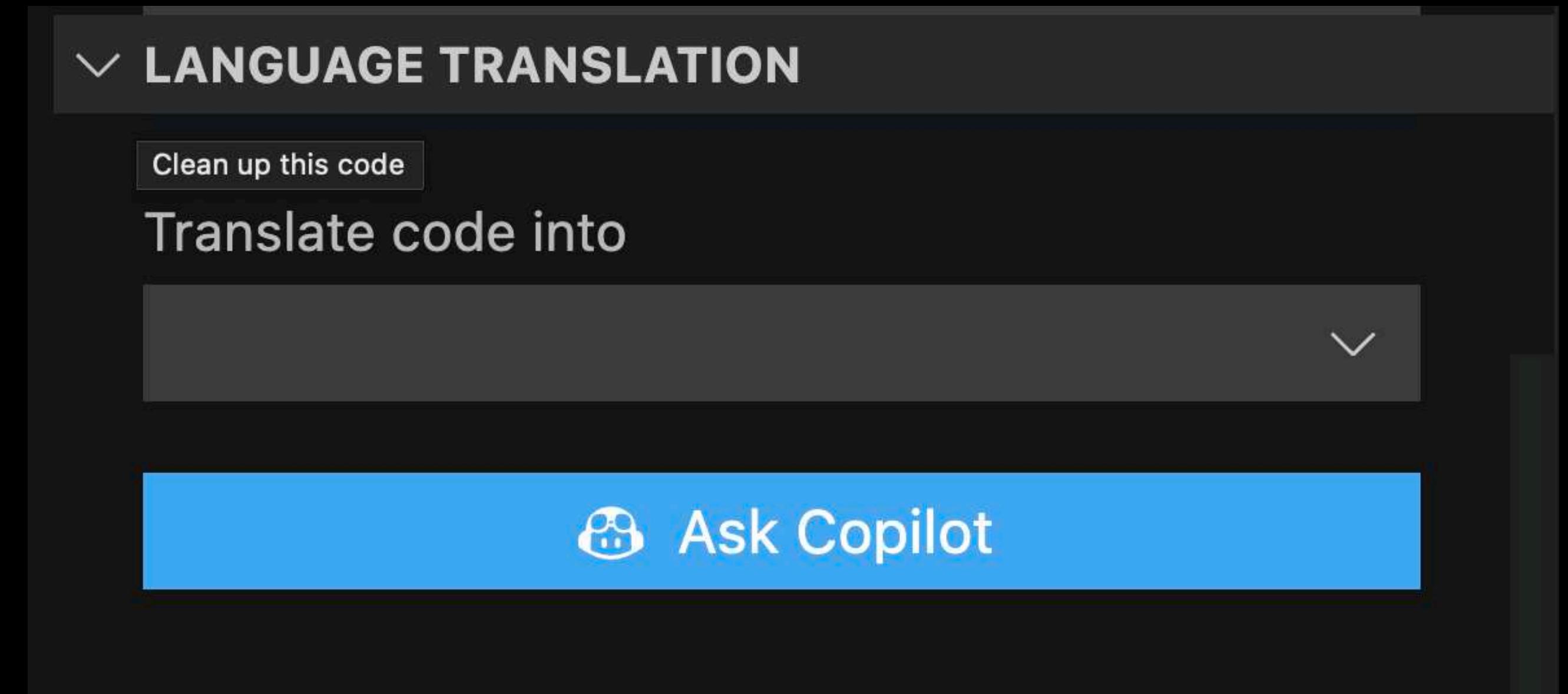


READABLE

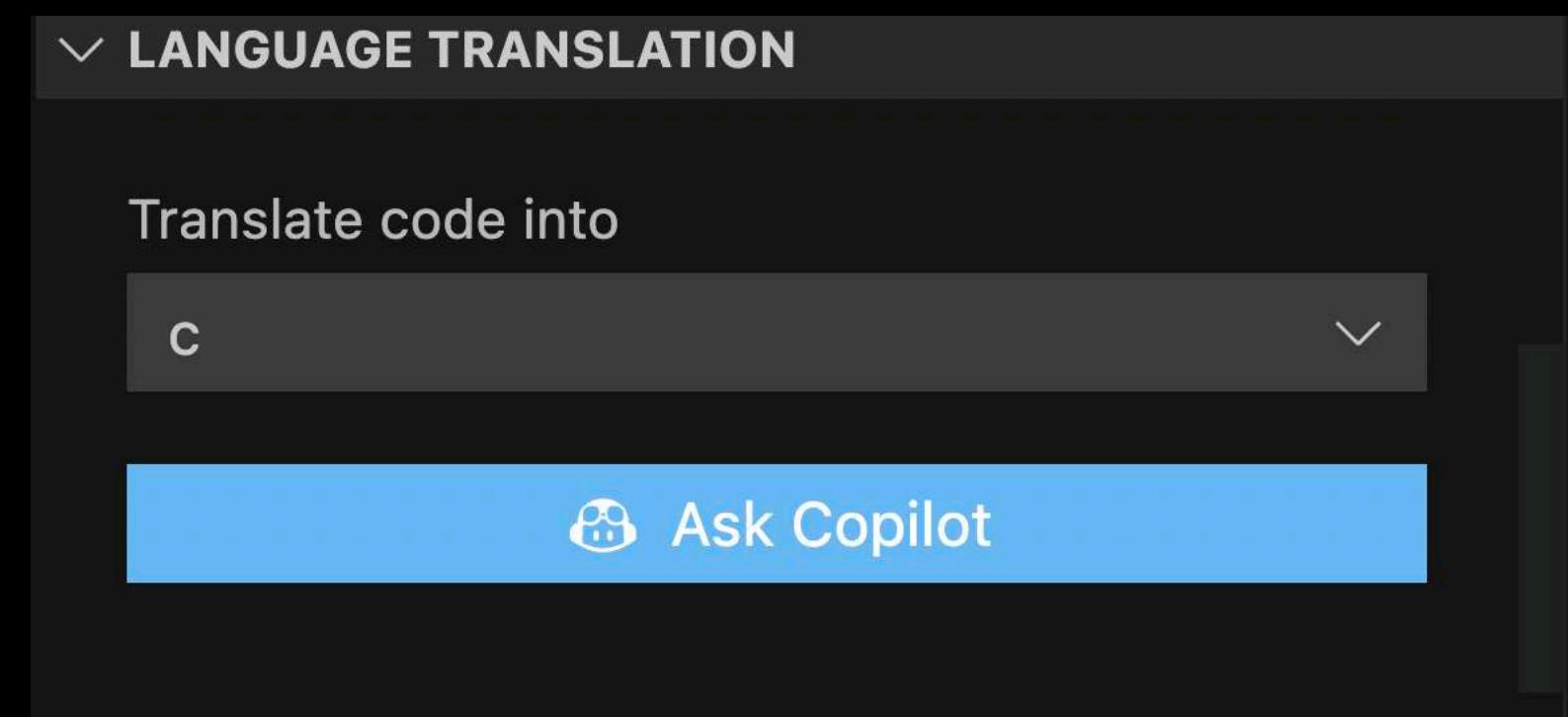
```
24 def star():
25     ...# print star
26     ...for i in range(9):
27         ...    print("*****")
```

พอยเขียนกำลังจะเข้าที่

พ่อเขียนกำลังจะเข้าที่
เจ้านายย้ายプロジェクトต้องใช้ภาษาใหม่



```
24 def star():
25     # print star
26     for i in range(9):
27         print("*****")
```



```
24 def star():
25     # print star
26     for i in range(9):
27         print("*****")
```

▼ LANGUAGE TRANSLATION

Translate code into

c

 Ask Copilot

▼ LANGUAGE TRANSLATION

```
void star() {
    // print star
    for (int i = 0; i < 9; i++) {
        printf("*****");
    }
}
```

```
24 def star():
25     # print star
26     for i in range(9):
27         print("*****")
```

▼ LANGUAGE TRANSLATION

Translate code into

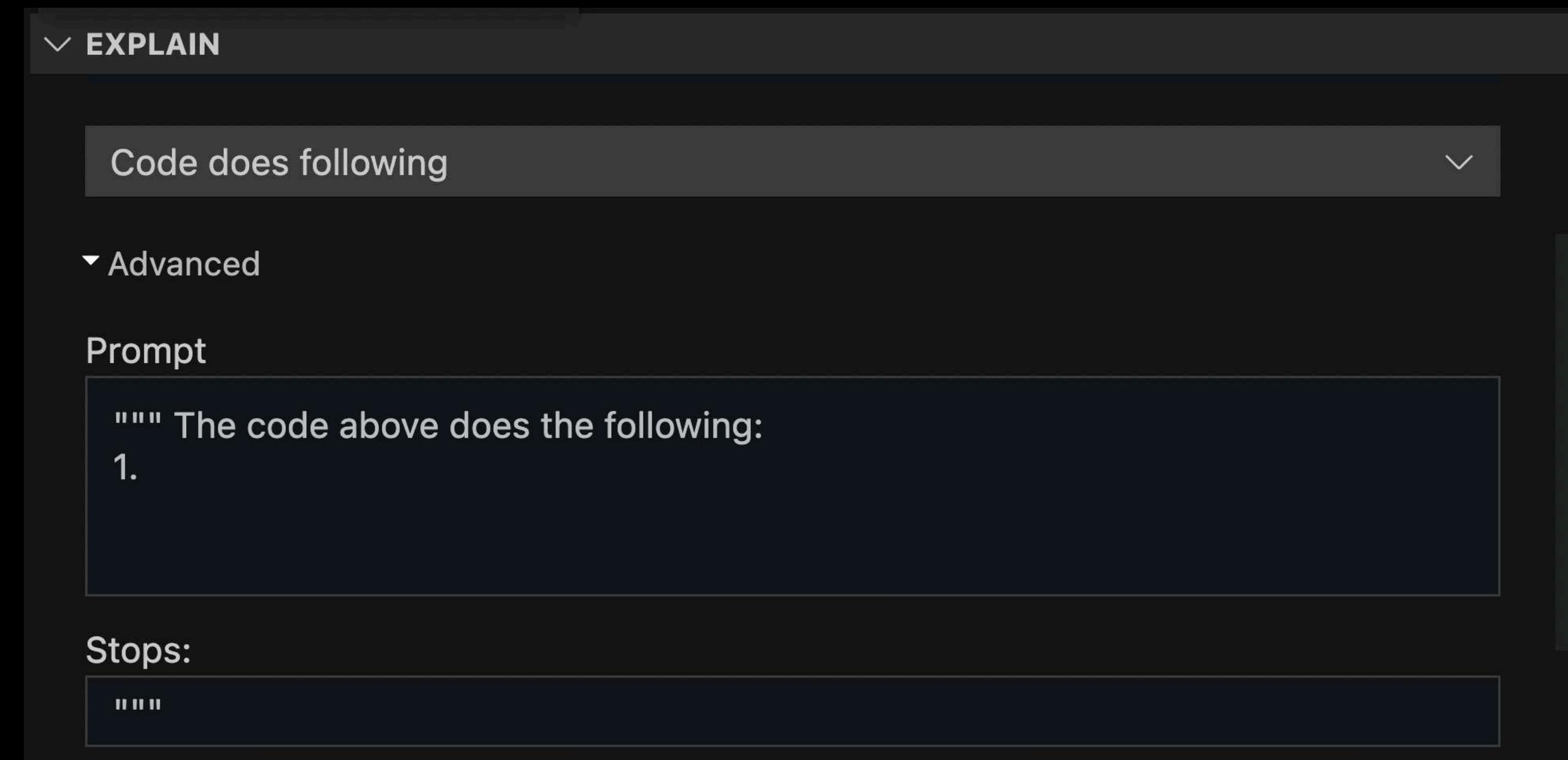
c

 Ask Copilot

▼ LANGUAGE TRANSLATION

```
void star() {
    // print star
    for (int i = 0; i < 9; i++) {
        printf("*****");
    }
}
```

(ແຄມ) ເດືອນນີ້ເຂົ້າຍບັນຄຳສັງກາຫາຄນ ພື້ນສ່າງ Code ໄດ້ແລວນະ !





Eric Ávila
@eavilaes

...

The screenshot shows a GitHub Copilot interface integrated into a code editor. On the left, a Python script generates a random number and saves it to an S3 bucket. The right side shows the Copilot interface with three main sections: 'EXPLAIN' (Code does following), 'RESULT' (The code above does the following: 1. Creates an instance of the boto3.resource class, 2. Creates a bucket named random-numbers, 3. Saves the random number to the S3 bucket.), and 'LANGUAGE TRANSLATION' (Copilot translating the Python code into Java). A green button labeled 'Ask Copilot' is visible in each section.

```

# generate random number and save it to S3
def generate_random_number():
    import random
    return random.randint(1, 100)

def save_to_s3(number):
    import boto3
    s3 = boto3.resource('s3')
    s3.Bucket('random-numbers').put_object(Key=str(number), Body=str(number))

if __name__ == '__main__':
    number = generate_random_number()
    save_to_s3(number)

```

EXPLAIN

Code does following

Advanced

RESULT

"" The code above does the following:
1. Creates an instance of the boto3.resource class,
2. Creates a bucket named random-numbers,
3. Saves the random number to the S3 bucket. """

LANGUAGE TRANSLATION

Ask Copilot

```

import java.util.Random;
import com.amazonaws.services.s3.AmazonS3;
import com.amazonaws.services.s3.AmazonS3ClientBuilder;
import com.amazonaws.services.s3.model.PutObjectRequest;

public class S3 {
    public static void save_to_s3(int number) {
        AmazonS3 s3 = AmazonS3ClientBuilder.defaultClient();
        s3.putObject(new PutObjectRequest("random-numbers", String.valueOf(number), String.valueOf(n
    }

    public static void generate_random_number() {
        Random random = new Random();
        int number = random.nextInt(100) + 1;
        save_to_s3(number);
    }
}

```

Gotta say, this is impressive

✨ @GitHubNext

Copilot can now:

1. generate code out of a comment,
2. explain what that code does, and
3. translate it into another language.

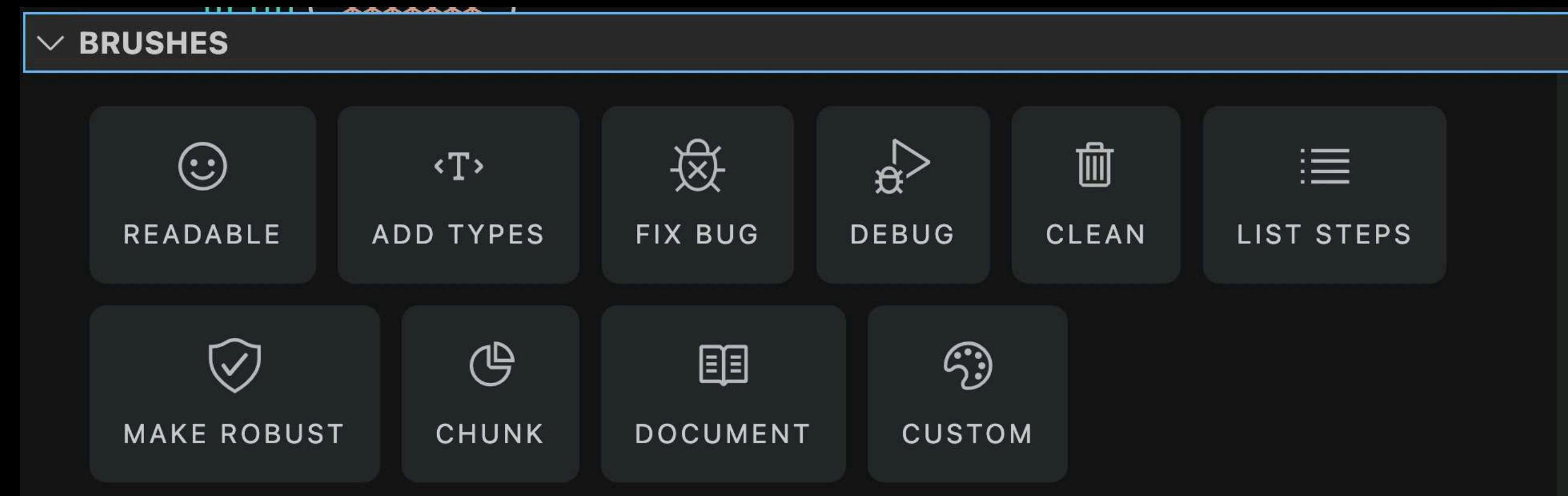
GitHub Next @GitHubNext · Mar 31

Announcing: GitHub Copilot Labs! 🚀
A new extension for @code that will be our canvas for ML-powered developer experiences. 🧵

next.github.com/projects/copilot-labs

[Show this thread](#)

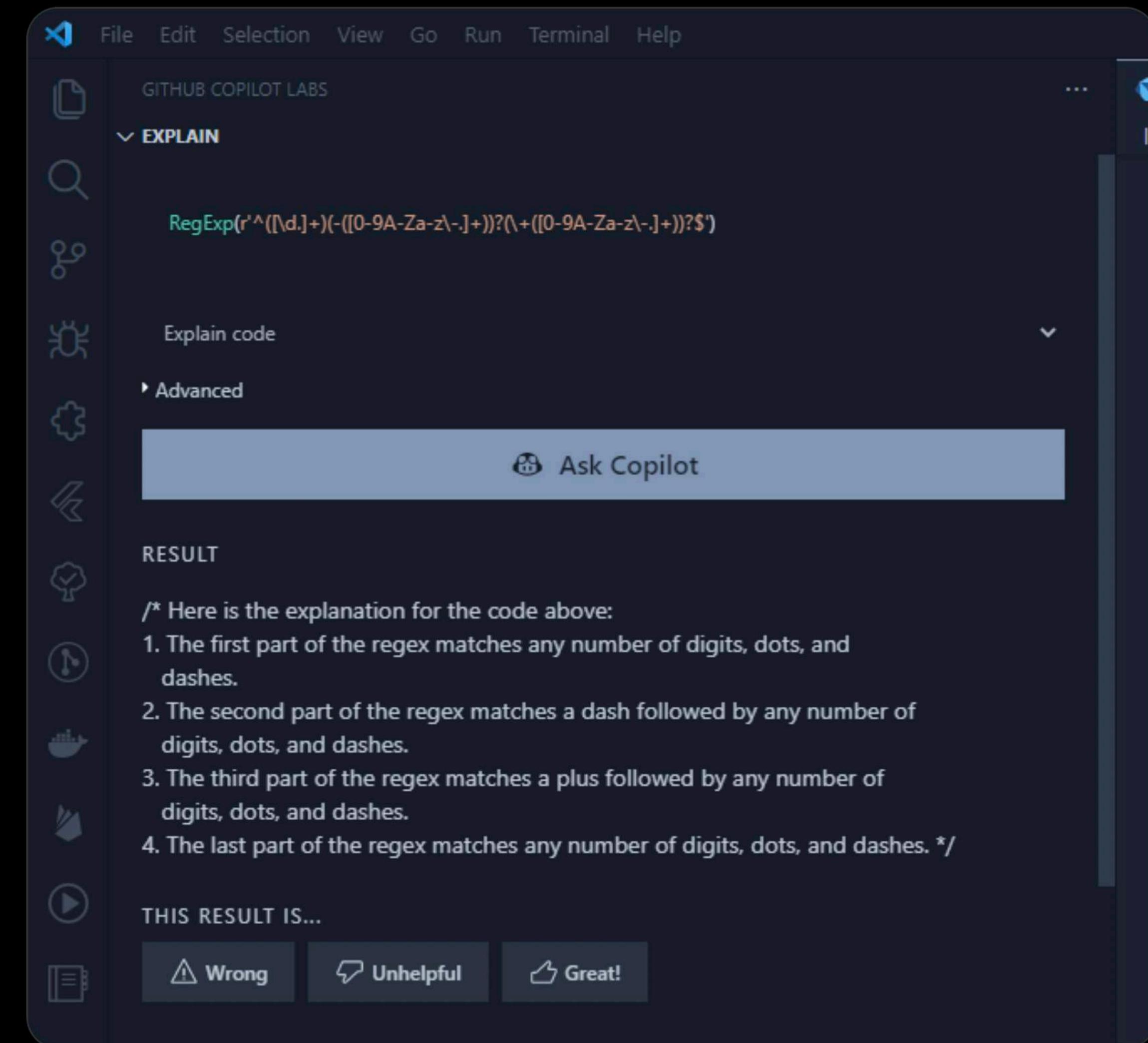
และ ยังมีอะไรให้ลองเล่นอีกเพียบบบ !



Arin Faraj ❤
@ArinFaraj

...

Github #Copilot Labs explains #regex better than anything else I've seen.





Tejas Chaudhari
@tejasness_

...

Github Copilot Labs is working great. This extension explained React 18's code very well without any mistakes.

#GitHubCopilot #GitHubCopilotLabs @GitHubNext

The screenshot shows a dark-themed code editor window for GitHub Copilot Labs. The menu bar includes Selection, View, Go, Run, Terminal, and Help. The title bar says 'GITHUB COPILOT LABS'. The tabs show 'index.js' and 'App.js'. The left sidebar has sections for 'EXPLAIN' and 'RESULT'. The 'EXPLAIN' section contains an explanation for the code in 'index.js': 'Here is the explanation for the code above: . First, we create the ReactDOM.createRoot() function which takes in a single parameter. This is the DOM node that we want to render our React component in. . We then call root.render() which takes in our react component as a parameter. . We then pass in our App component to the root.render() function. . Since our App component is the top-level component of our application, ReactDOM.createRoot() will create a new root'. The main code editor area shows the following code:

```
src > index.js > ...
1 import React from 'react';
2 import ReactDOM from 'react-dom/client';
3 import './index.css';
4 import App from './App';
5
6 const root = ReactDOM.createRoot(document);
7 root.render(<App />);
8
```

ພວເຂົມທຸກອຍ່າງຈະລອງ

ພວເຂົຍນຖຸກອຍ່າງຈບລ່ອ
ເຮັດວຽກທຳໃຫ້ານເດີມ ຈຸ ມັນວັດໂນມັຕ

CI/CD

CI/CD

Continuous Integration (CI)

Continuous Delivery (CD)

Continuous Deployment (CD)

CI/CD



CI/CD



TEST : PASSED !

CI/CD



TEST : PASSED !

DELIVERING CODE : PASSED !

ประหยัดเวลาลงได้แบบเห็น ๆ



GitHub Actions



GitHub Actions

Automate your workflow from idea to production

GitHub Actions makes it easy to automate all your software workflows, now with world-class CI/CD. Build, test, and deploy your code right from GitHub. Make code reviews, branch management, and issue triaging work the way you want.

[Get started with Actions >](#)

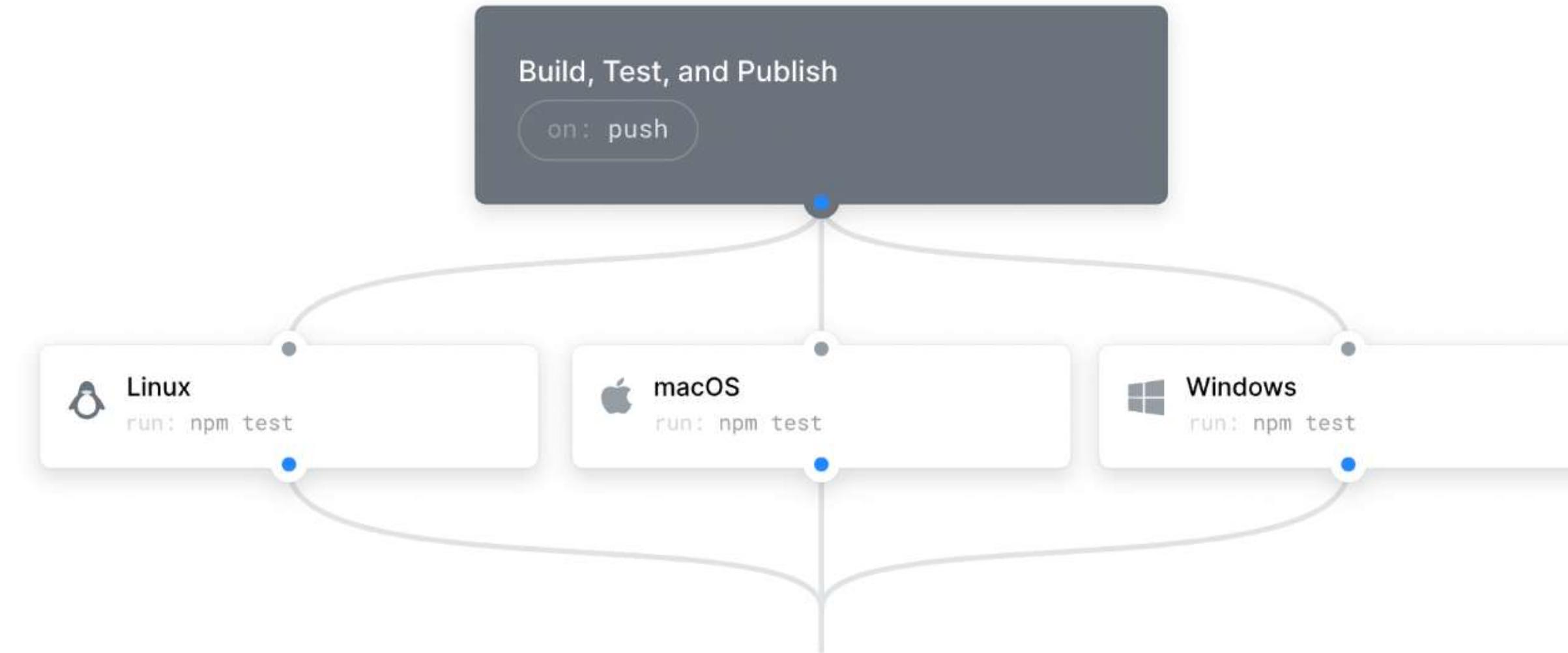
Questions? [Contact Sales >](#)



Run a workflow on any GitHub event

Kick off workflows with GitHub events like push, issue creation, or a new release. Combine and configure actions for the services you use, built and maintained by the community.

Whether you want to build a container, deploy a web service, or automate welcoming new users to your open source projects—there's an action for that. Pair GitHub Packages with Actions to simplify package management, including version updates, fast distribution with our global CDN, and dependency resolution, using your existing GITHUB_TOKEN.



Linux, macOS, Windows, ARM, and containers

Hosted runners for every major OS make it easy to build and test all your projects. Run directly on a VM or inside a container. Use your own VMs, in the cloud or on-prem, with self-hosted runners.



Matrix builds

Save time with matrix workflows that simultaneously test across multiple operating systems and versions of your runtime.



Any language

GitHub Actions supports Node.js, Python, Java, Ruby, PHP, Go, Rust, .NET, and more. Build, test, and deploy applications in your language of choice.

```
  ✓ should respond user repos json
  ✓ should 404 with unknown user

when requesting an invalid route
  ✓ should respond with 404 json

1123 passing (4s)

=====
Writing coverage object [/home/runner/build/coverage.json]
Writing coverage reports at [/home/runner/build/coverage]

=====
Coverage summary
Statements : 98.81% (1916/1939), 38 ignored
Branches   : 94.58% (751/794), 22 ignored
Functions   : 100% (267/267)
Lines      : 100% (1872/1872)

The command "npm run test-ci" exited with 0.

$ npm run lint

> express@4.17.1 lint /home/runner/build/express
> eslint .

The command "npm run lint" exited with 0.

store build cache

$ # Upload coverage to coveralls

Done. Your build exited with 0.
```

All checks have passed
4 successful checks

✓ **build** Successfully in 59s — build

✓ **test** Successfully in 59s — build

✓ **publish** Successfully in 59s — build

This branch has no conflicts with the base branch
Merging can be performed automatically.

Merge pull request ▾ You can also [open this in GitHub Desktop](#) or view [command line instructions](#).



Live logs

See your workflow run in realtime with [color and emoji](#). It's one click to copy a link that highlights a specific line number to share a CI/CD failure.



Built in secret store

Automate your software development practices with workflow files embracing the Git flow by codifying it in your repository.



Multi-container testing

Test your web service and its DB in your workflow by simply adding some docker-compose to your workflow file.

ci.yml

```
1  on: push
2  jobs:
3    test:
4      strategy:
5        matrix:
6          platform: [ubuntu-latest, macos-latest, windows-latest]
7          runs-on: ${{ matrix.platform }}
8          steps:
9            - uses: actions/checkout@v3
10           - uses: actions/setup-node@v3
11             with:
12               node-version: 16
13             - run: npm install-ci-test
14             - uses:
```

ernetes



any Kubernetes

Code Climate Velocity

In-depth code metrics to streamline your engineering processes

[codeclimate/velocity-deploy-action](#)

Mark stale issues and pull ...

Automatically label and close stale issues and pull requests

[actions/stale](#)

```
27  publish:
28    needs: [test]
29    steps:
30      - uses: actions/checkout@v3
```

Community-powered workflows

GitHub Actions connects all of your tools to automate every step of your development workflow. Easily deploy to any cloud, create tickets in Jira, or publish a package to npm.

Want to venture off the beaten path? Use the millions of open source libraries available on GitHub to create your own actions. Write them in JavaScript or create a container action—both can interact with the full GitHub API and any other public API.

Coveralls

Track your test coverage metrics

[coverallsapp/github-action](#)

Glo Boards

Integrate your Glo boards into your code workflow

[Axosoft/glo-actions](#)

Mabl

Integrate cross-browser testing into your GitHub Actions workflow

[mablhq/github-mabl-actions](#)

Label a pull request

Label pull requests based on changed files

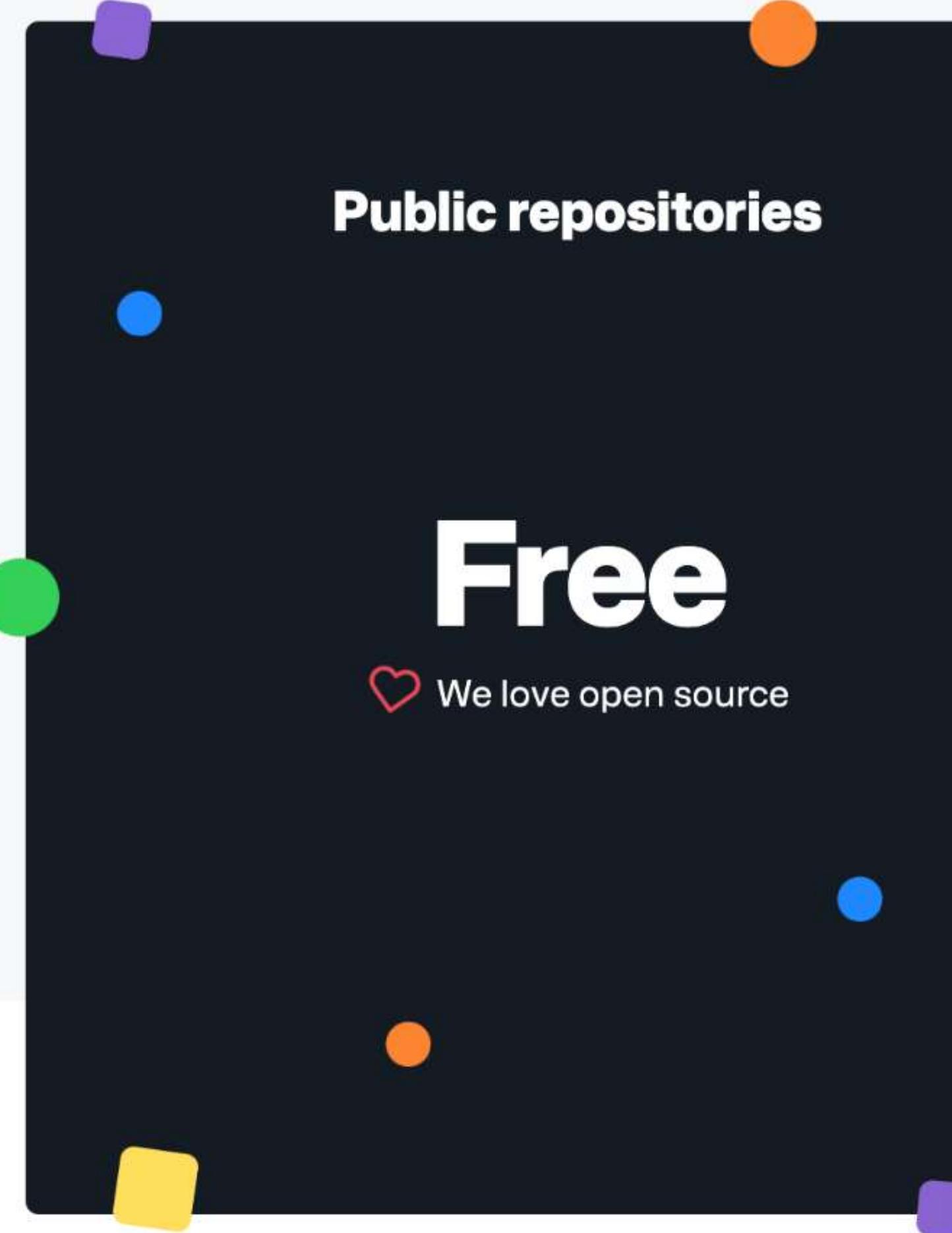
[actions/labeler](#)

Deploy to

Deploy your code to Zeit

[actions/deploy-to-zeit](#)

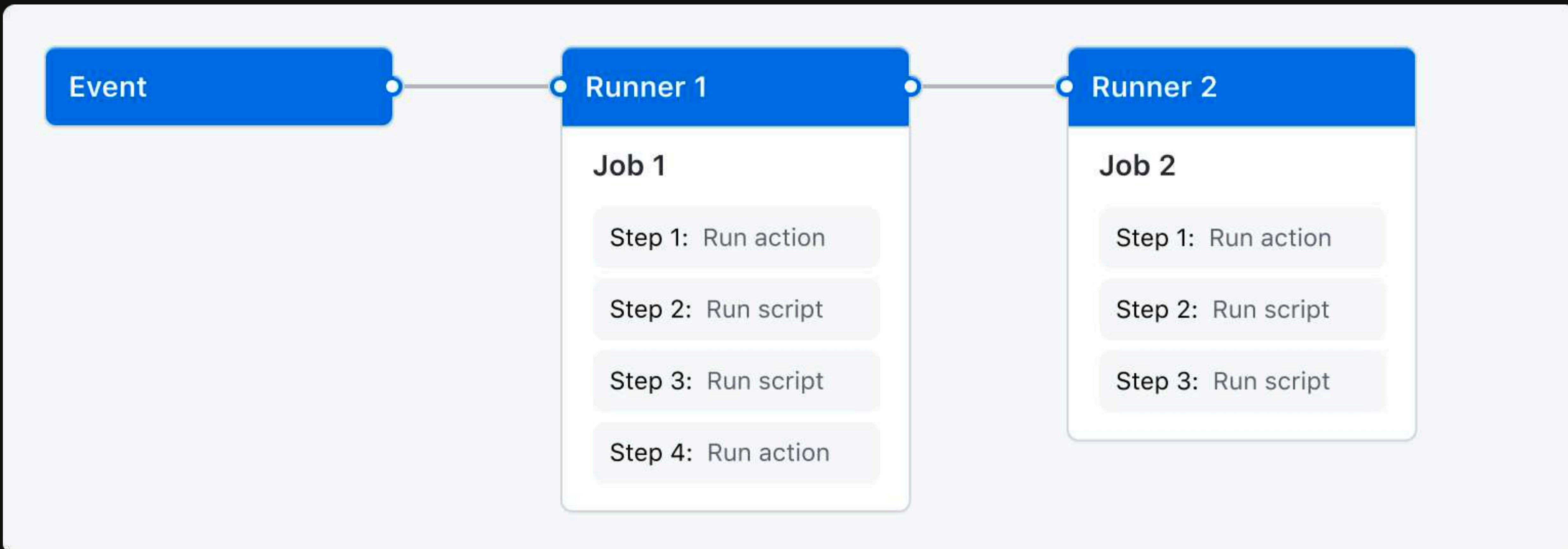
Simple, pay-as-you-go pricing



Private repositories

Included minutes	Additional hosted runner minutes
Free	2,000 minutes per month
Pro	3,000 minutes per month
Team	3,000 minutes per month
Enterprise	50,000 minutes per month
	Linux 2 cores, 7GB \$0.008 per minute
	Windows 2 cores, 7GB \$0.016 per minute
	macOS 3 cores, 7GB \$0.08 per minute
	Self-hosted Free

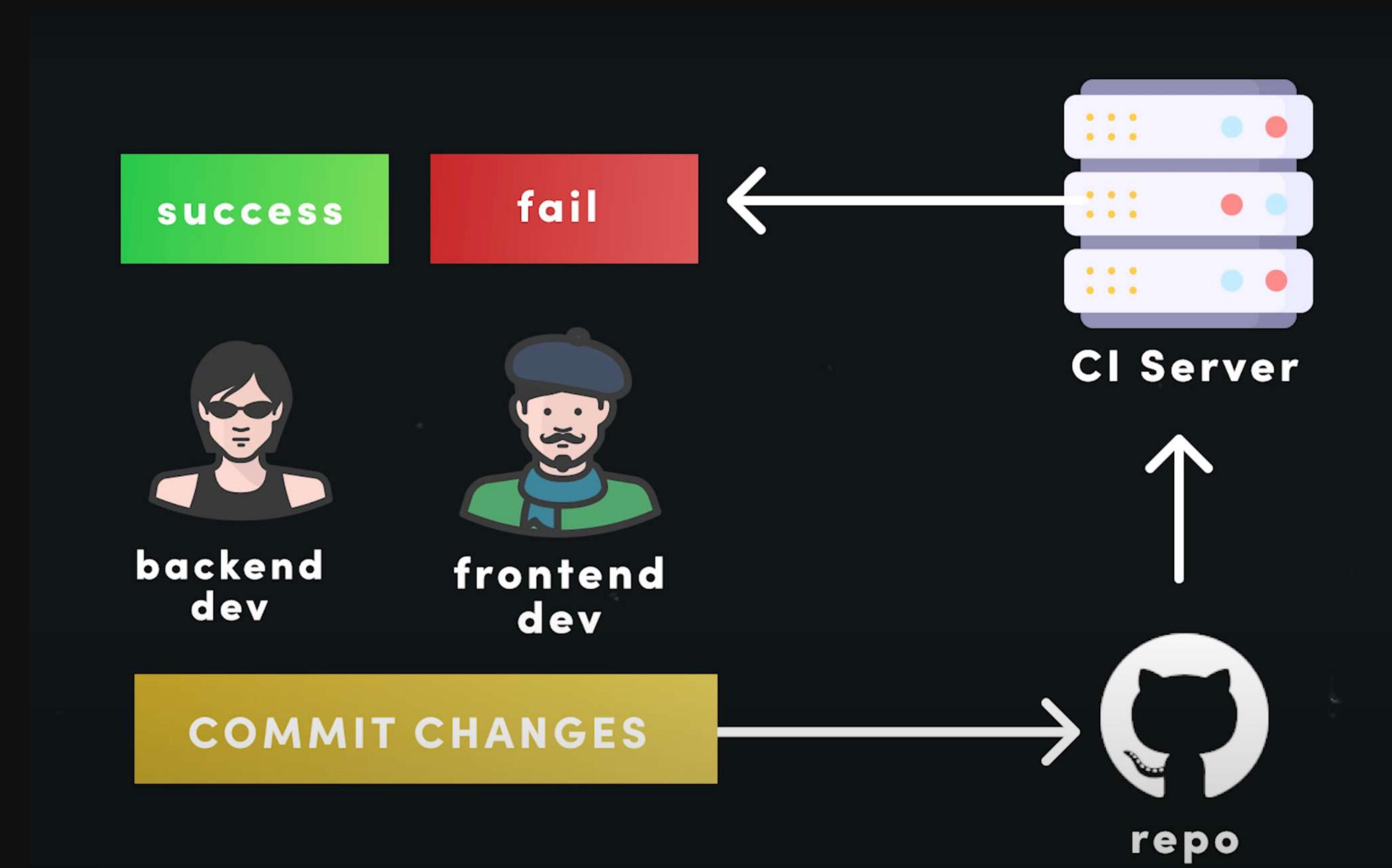
Included, hosted runner minutes are consumed at different rates for each operating system. GitHub Actions is not available for private repos in legacy per-repository plans. [Learn more](#)



สถานการณ์ใดบ้างที่เราสามารถนำ
GitHub Action มาใช้ได้ ?

Continuous Integration

Continuous Integration



Continuous Deployment

Publish (NPM) Package

Schedule (Backend) Jobs

ขั้นตอนการทำงานหลักของ GitHub Action

Create an example workflow

GitHub Actions uses YAML syntax to define the workflow. Each workflow is stored as a separate YAML file in your code repository, in a directory named `.github/workflows`.

You can create an example workflow in your repository that automatically triggers a series of commands whenever code is pushed. In this workflow, GitHub Actions checks out the pushed code, installs the [bats](#) testing framework, and runs a basic command to output the bats version:

```
bats -v.
```

1 In your repository, create the `.github/workflows/` directory to store your workflow files.

2 In the `.github/workflows/` directory, create a new file called `learn-github-actions.yml` and add the following code.

```
name: learn-github-actions
on: [push]
jobs:
  check-bats-version:
    runs-on: ubuntu-latest
    steps:
      - uses: actions/checkout@v3
      - uses: actions/setup-node@v3
        with:
          node-version: '14'
      - run: npm install -g bats
      - run: bats -v
```

3 Commit these changes and push them to your GitHub repository.

Your new GitHub Actions workflow file is now installed in your repository and will run automatically each time someone pushes a change to the repository. To see the details about a workflow's execution history, see "[Viewing the activity for a workflow run](#)."

Understanding the workflow file

To help you understand how YAML syntax is used to create a workflow file, this section explains each line of the introduction's example:

```
name: learn-github-actions
```

Optional - The name of the workflow as it will appear in the Actions tab of the GitHub repository.

```
on: [push]
```

Specifies the trigger for this workflow. This example uses the `push` event, so a workflow run is triggered every time someone pushes a change to the repository or merges a pull request. This is triggered by a push to every branch; for examples of syntax that runs only on pushes to specific branches, paths, or tags, see "[Workflow syntax for GitHub Actions](#)."

```
jobs:
```

Groups together all the jobs that run in the `learn-github-actions` workflow.

```
check-bats-version:
```

Defines a job named `check-bats-version`. The child keys will define properties of the job.

```
check-bats-version:
```

Defines a job named `check-bats-version`. The child keys will define properties of the job.

```
runs-on: ubuntu-latest
```

Configures the job to run on the latest version of an Ubuntu Linux runner. This means that the job will execute on a fresh virtual machine hosted by GitHub. For syntax examples using other runners, see "[Workflow syntax for GitHub Actions](#)."

```
steps:
```

Groups together all the steps that run in the `check-bats-version` job. Each item nested under this section is a separate action or shell script.

```
- uses: actions/checkout@v3
```

The `uses` keyword specifies that this step will run `v3` of the `actions/checkout` action. This is an action that checks out your repository onto the runner, allowing you to run scripts or other actions against your code (such as build and test tools). You should use the checkout action any time your workflow will run against the repository's code.

```
- uses: actions/setup-node@v3
  with:
    node-version: '14'
```

This step uses the `actions/setup-node@v3` action to install the specified version of the Node.js (this example uses v14). This puts both the `node` and `npm` commands in your `PATH`.

```
- run: npm install -g bats
```

The `run` keyword tells the job to execute a command on the runner. In this case, you are using `npm` to install the `bats` software testing package.

```
- run: bats -v
```

Finally, you'll run the `bats` command with a parameter that outputs the software version.

ขั้นตอนการทำงานหลักของ GitHub Action

```
name: learn-github-actions
on: [push]
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  check-bats-version:
    runs-on: ubuntu-latest
    steps:
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        with:
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```

Events > Jobs > Runners > Steps > Actions

ขั้นตอนการทำงานหลักของ GitHub Action

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        with:
          node-version: '14'
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      - run: bats -v
```

Workflow YAML File

Events > Jobs > Runners > Steps > Actions

ขั้นตอนการทำงานหลักของ GitHub Action

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```



Events > Jobs > Runners > Steps > Actions

ขั้นตอนการทำงานหลักของ GitHub Action

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Events > **Jobs** > Runners > Steps > Actions

ขั้นตอนการทำงานหลักของ GitHub Action

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Events > Jobs > **Runners** > Steps > Actions

ขั้นตอนการทำงานหลักของ GitHub Action

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          node-version: '14'
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      - run: bats -v
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Events > Jobs > Runners > **Steps** > Actions

ขั้นตอนการทำงานหลักของ GitHub Action

```
name: learn-github-actions
on: [push]
jobs:
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    runs-on: ubuntu-latest
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        with:
          node-version: '14'
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      - run: bats -v
```

Events > Jobs > Runners > Steps > Actions 

Create an example workflow

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You can create an example workflow in your repository that automatically triggers a series of commands whenever code is pushed. In this workflow, GitHub Actions checks out the pushed code, installs the [bats](#) testing framework, and runs a basic command to output the bats version:

```
bats -v.
```

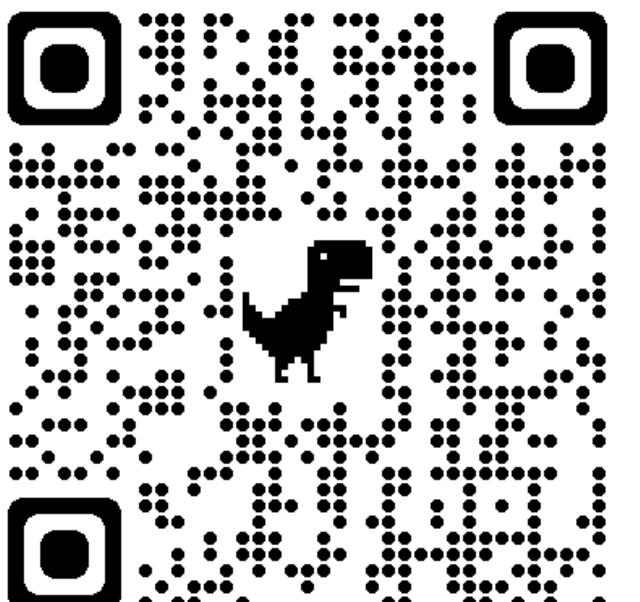
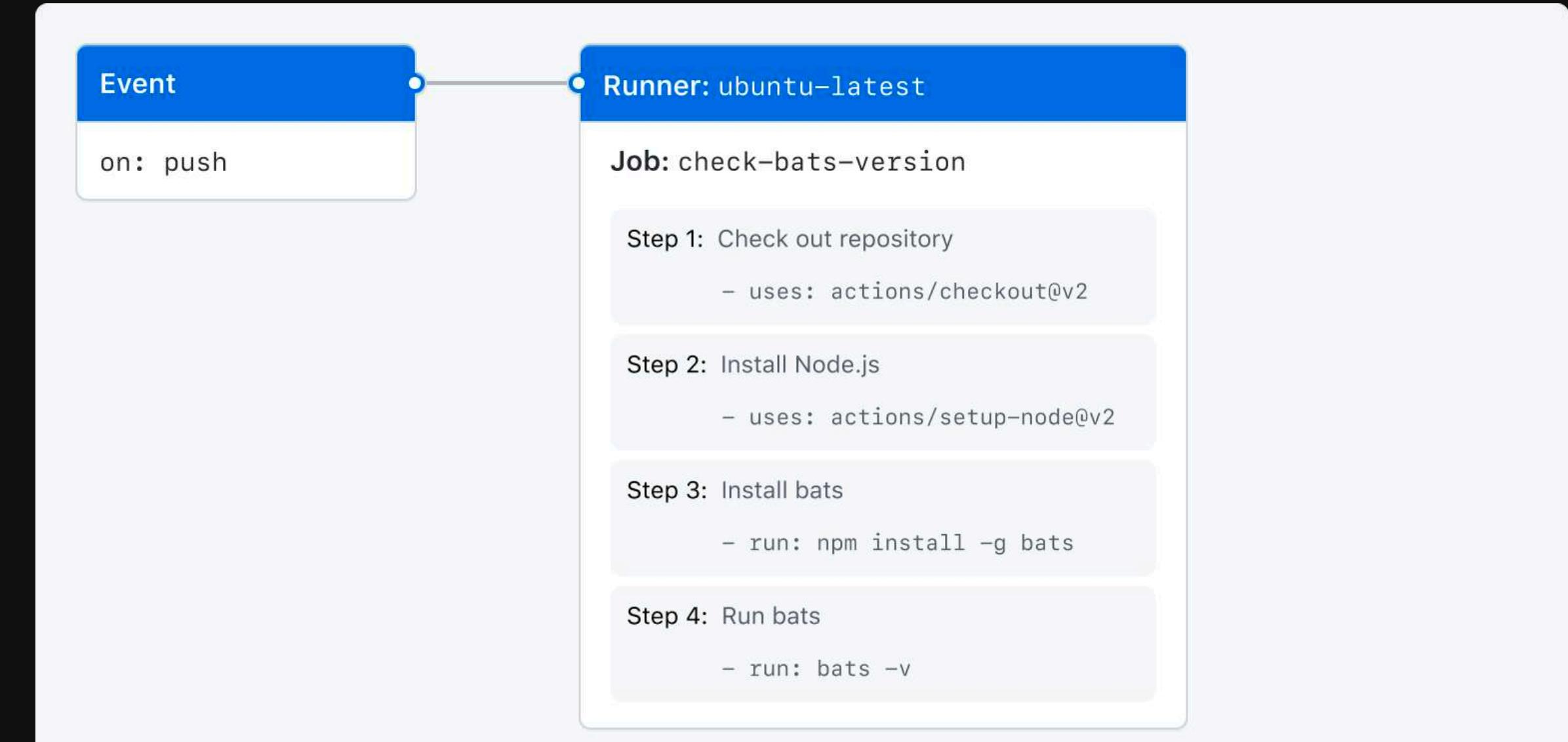
- 1 In your repository, create the `.github/workflows/` directory to store your workflow files.

- 2 In the `.github/workflows/` directory, create a new file called `learn-github-actions.yml` and add the following code.

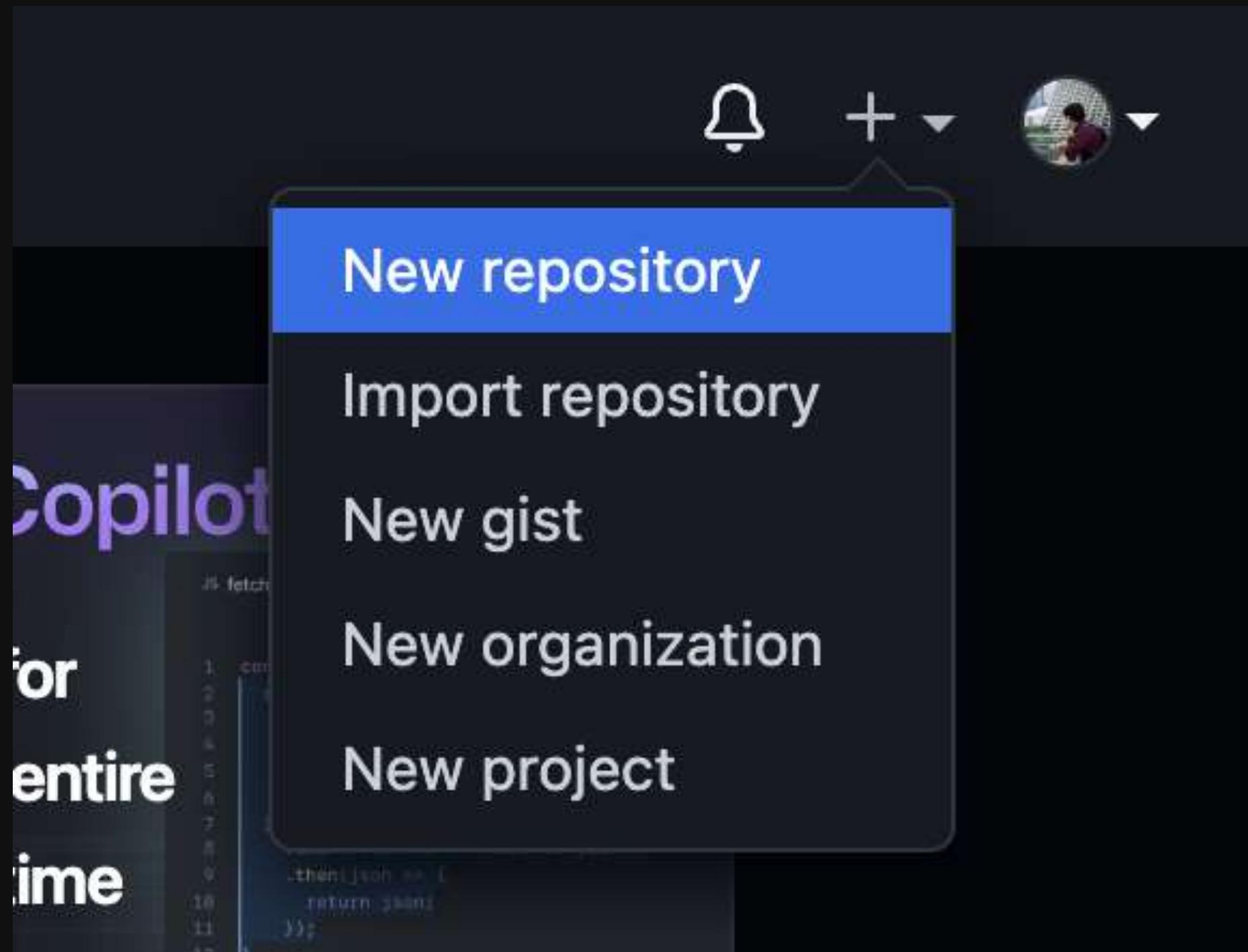
```
name: learn-github-actions
on: [push]
jobs:
  check-bats-version:
    runs-on: ubuntu-latest
    steps:
      - uses: actions/checkout@v3
      - uses: actions/setup-node@v3
        with:
          node-version: '14'
      - run: npm install -g bats
      - run: bats -v
```

- 3 Commit these changes and push them to your GitHub repository.

Your new GitHub Actions workflow file is now installed in your repository and will run automatically each time someone pushes a change to the repository. To see the details about a workflow's execution history, see "[Viewing the activity for a workflow run](#)."



มาลองดูการทำงานจริงกันดีกว่า



Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository](#).

Repository template
Start your repository with a template repository's contents.

No template ▾

Owner * **Repository name ***

PrameKittikorn / FirstAction ✓

Great repository names are short and memorable. Need inspiration? How about [automatic-adventure](#)?

Description (optional)
ทดสอบการใช้งาน GitHub Actions

Public
Anyone on the internet can see this repository. You choose who can commit.

Private
You choose who can see and commit to this repository.

Initialize this repository with:
Skip this step if you're importing an existing repository.

Add a README file
This is where you can write a long description for your project. [Learn more](#).

Add .gitignore
Choose which files not to track from a list of templates. [Learn more](#).

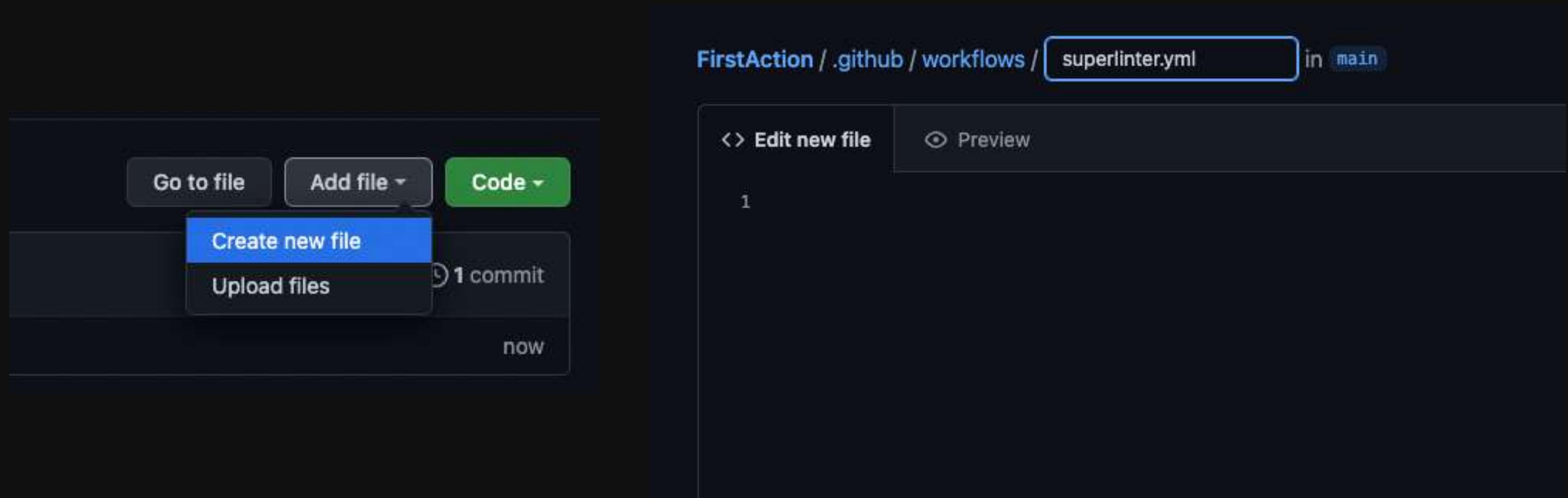
.gitignore template: None ▾

Choose a license
A license tells others what they can and can't do with your code. [Learn more](#).

License: None ▾

Grant your Marketplace apps access to this repository
You are subscribed to 1 Marketplace app

สร้าง Repository ใหม่ขึ้นมา



สร้างไฟล์ใหม่ใน .github/workflows/superlinter.yml

[main](#)

FirstAction / .github / workflows / superlinter.yml

[View runs](#)[Go to file](#)

...



PrameKittikorn Update superlinter.yml

Latest commit 94e4069 now

[History](#)

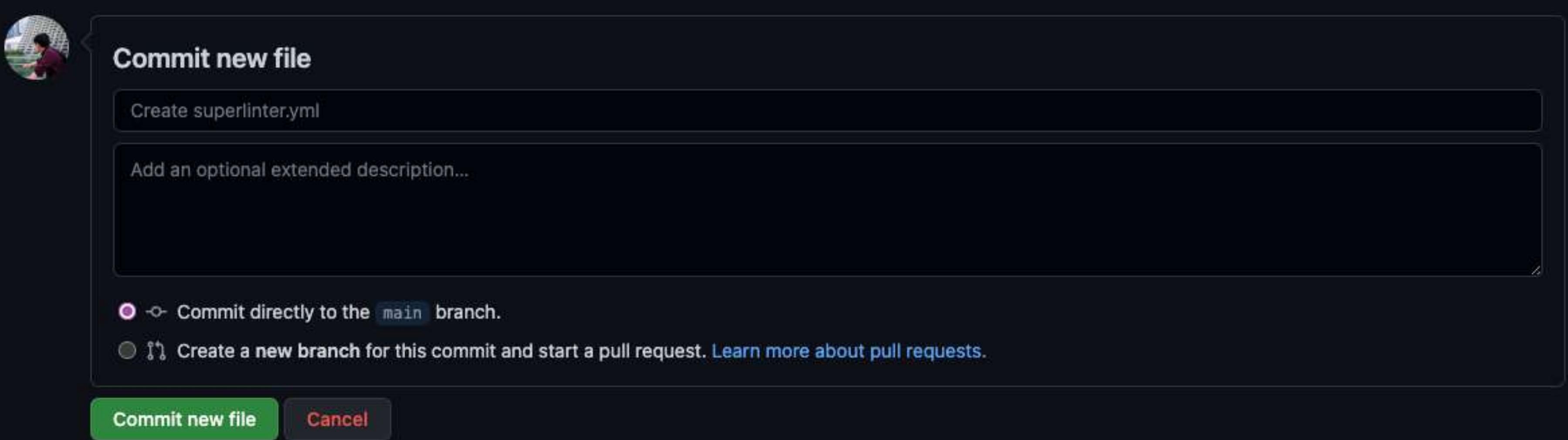
1 contributor

17 lines (14 sloc) | 350 Bytes

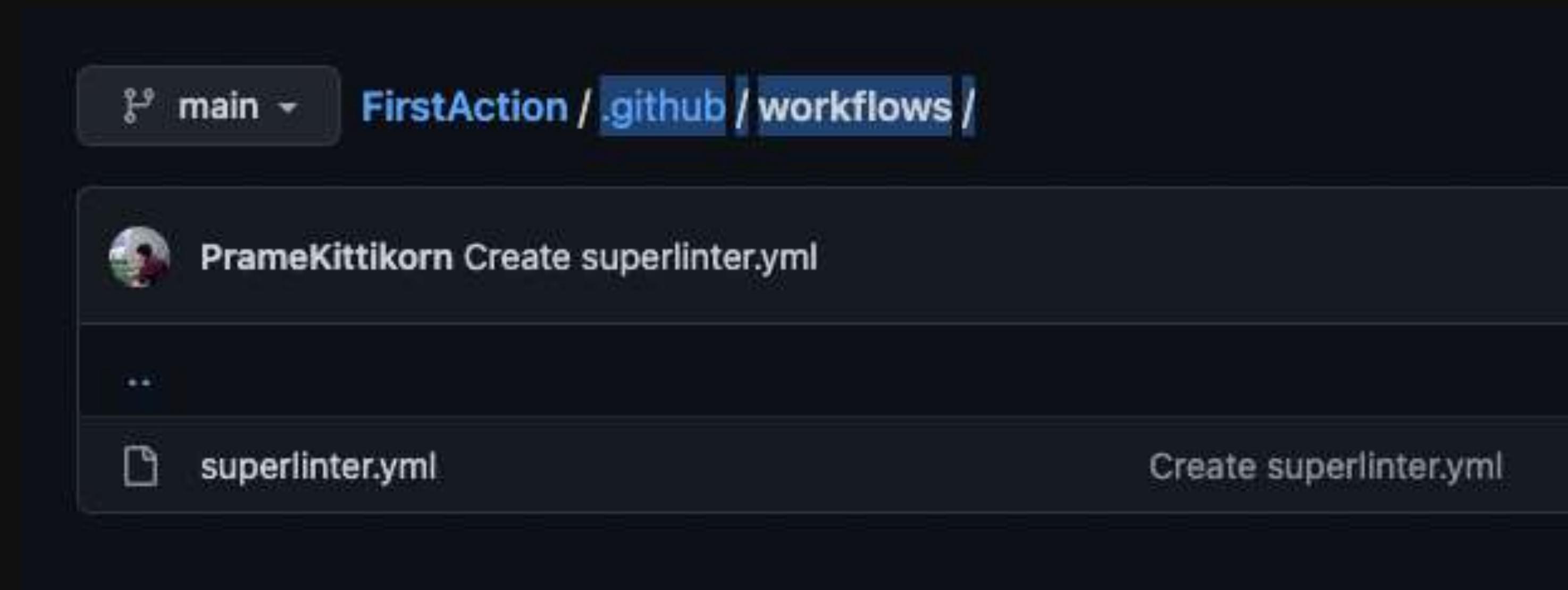
[Raw](#)[Blame](#)

```
1 name: Super-Linter
2
3 on: push
4
5 jobs:
6   super-lint:
7     name: Lint code base
8     runs-on: ubuntu-latest
9     steps:
10      - name: Checkout code
11        uses: actions/checkout@v2
12
13      - name: Run Super-Linter
14        uses: github/super-linter@v4
15        env:
16          DEFAULT_BRANCH: main
17          GITHUB_TOKEN: ${{ secrets.GITHUB_TOKEN }}
```

ໄລ່ Workflow ຂອງເຮັດໄປໃນไฟລ໌ yml



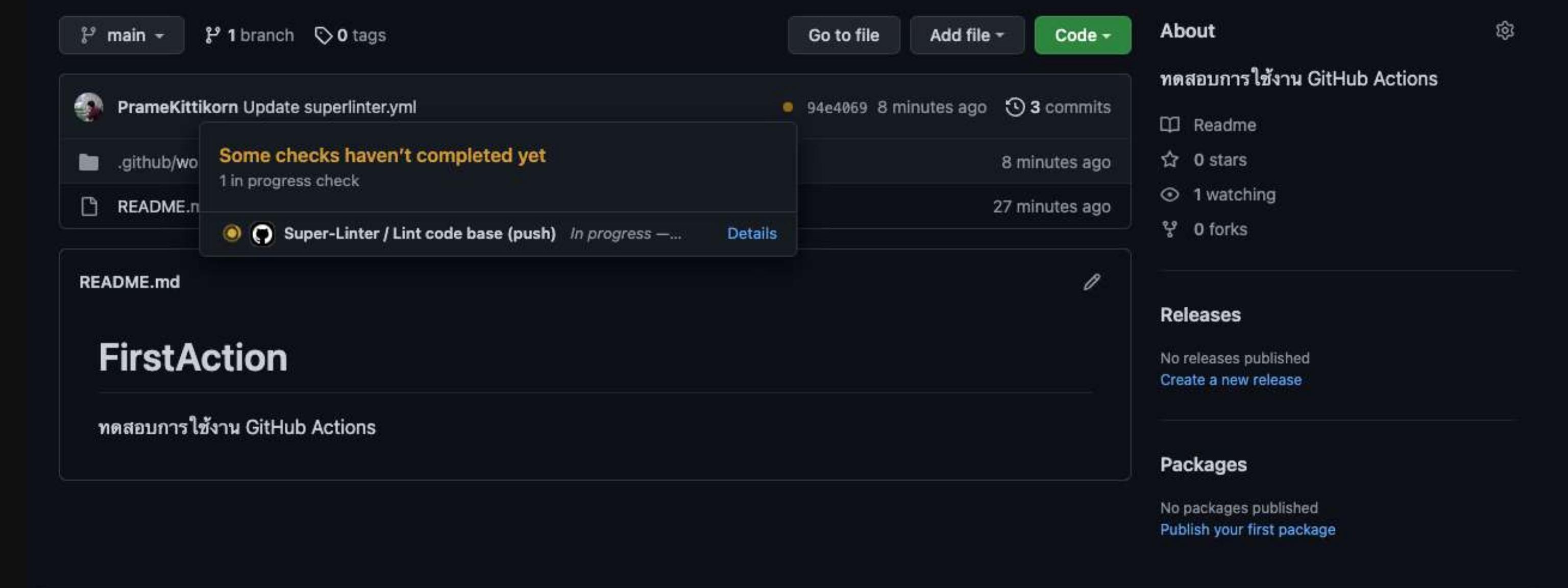
ทำการ Commit เข้า main



ลั่งเกต Directory ให้ดี เพราะถ้าสะกดหรือใส่ผิดที่ Workflow ที่สร้างจะไม่ถูก Trigger

The screenshot shows a GitHub repository page for a project named "FirstAction". The repository has 1 branch and 0 tags. The commit history shows two commits: one by "PrameKittikorn" titled "Create superlinter.yml" made 1 minute ago, and an "Initial commit" made 14 minutes ago. A large yellow hand cursor icon is positioned over the second commit. The README.md file contains the text "FirstAction" and "ทดสอบการใช้งาน GitHub Actions". The repository statistics show 0 stars, 1 watching, and 0 forks. The "About" section includes links for "Readme", "Releases", and "Packages". The footer contains links for GitHub, Inc., Terms, Privacy, Security, Status, Docs, Contact GitHub, Pricing, API, Training, Blog, and About.

ลีส์มแบบนี้คือ Process ของ Workflow กำลังทำงาน
ถ้าเป็นลีเขียวคือ Pass และ สีแดงคือ Fail



จื๊มเข้าไปดูสถานะได้นะ !

PrameKittikorn / FirstAction Private

<> Code ⚡ Issues 🛡 Pull requests ⚡ Actions Projects

Actions

New workflow

All workflows

Super-Linter



Management

Caches

2 workflow runs

✓ [Update superlinter.yml](#)

Super-Linter #2: Co... 94e4069 pushed by PrameKittikorn



จิ้มเข้าไปดูสถานะได้นะ !

[← Super-Linter](#)

✓ Update superlinter.yml #2

[Summary](#)

Triggered via push 31 minutes ago

Status: Success | Total duration: 2m 21s | Billable time: 3m | Artifacts: -

PrameKittikorn pushed → 94e4069 main

Jobs:

- ✓ Lint code base

Run details:

- ⌚ Usage
- 📄 Workflow file

superlinter.yml
on: push

✓ Lint code base 2m 13s

ดูรายละเอียดการทำงานได้மរานී

PrameKittikorn / FirstAction Private

<> Code ⚡ Issues 🛡 Pull requests ⏪ Actions 📂 Projects 🛡 Security 🔍 Insights 🌐 Setting

← Super-Linter

✓ Update superlinter.yml #2

🏠 Summary

Jobs

✓ Lint code base

Run details

⌚ Usage

⤷ Workflow file

Triggered via push 32 minutes ago

PrameKittikorn pushed -o 94e4069 main

Status

Success

superlinter.yml

on: push

✓ Lint code base

2m 13s



← Super-Linter

✓ Update superlinter.yml #2

🏠 Summary

Jobs

✓ Lint code base

Run details

⌚ Usage

⤷ Workflow file

Lint code base

succeeded 30 minutes ago in 2m 13s

> ✓ Set up job

> ✓ Pull ghcr.io/github/super-linter:v4.9.7

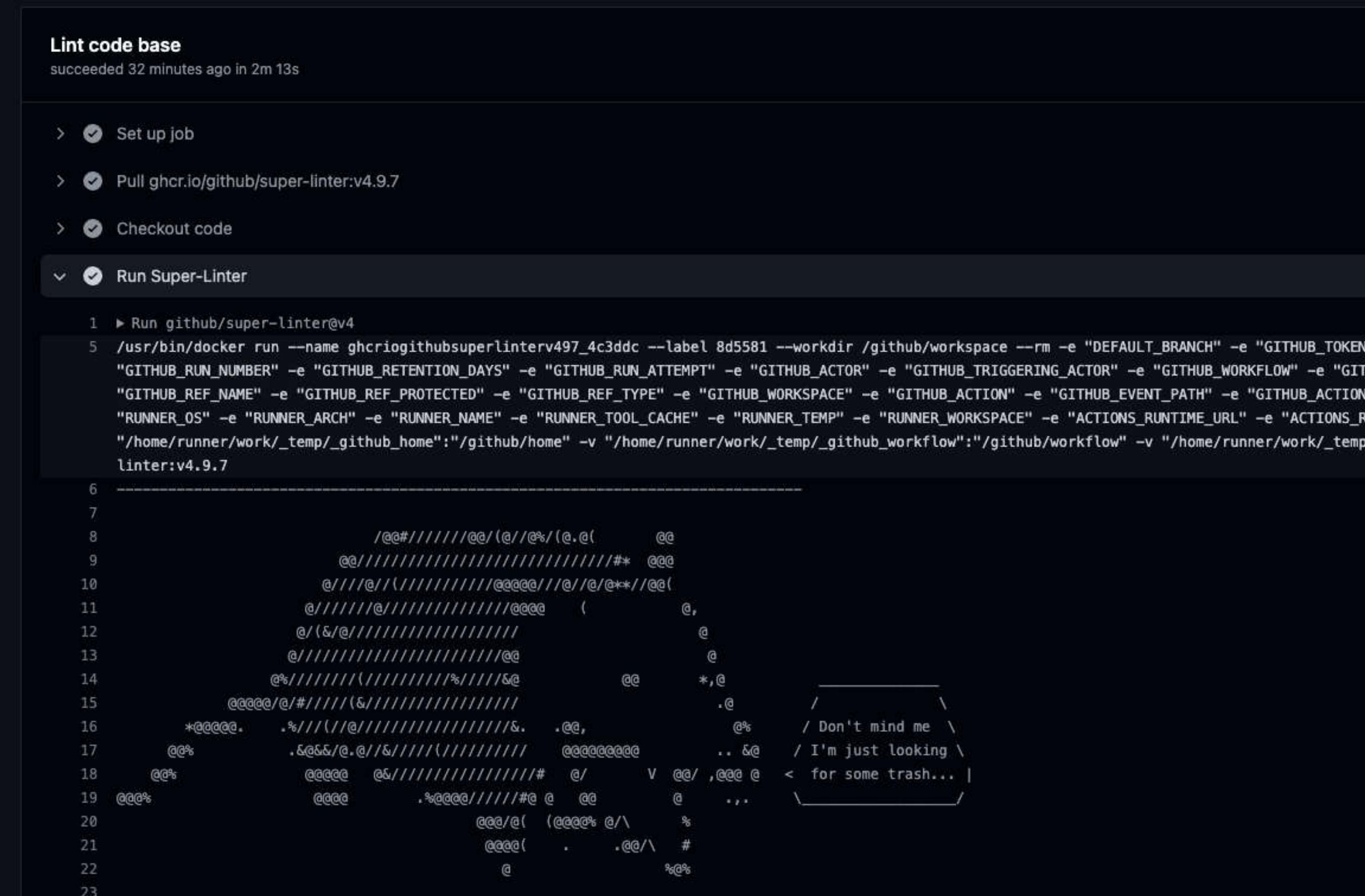
> ✓ Checkout code

> ✓ Run Super-Linter

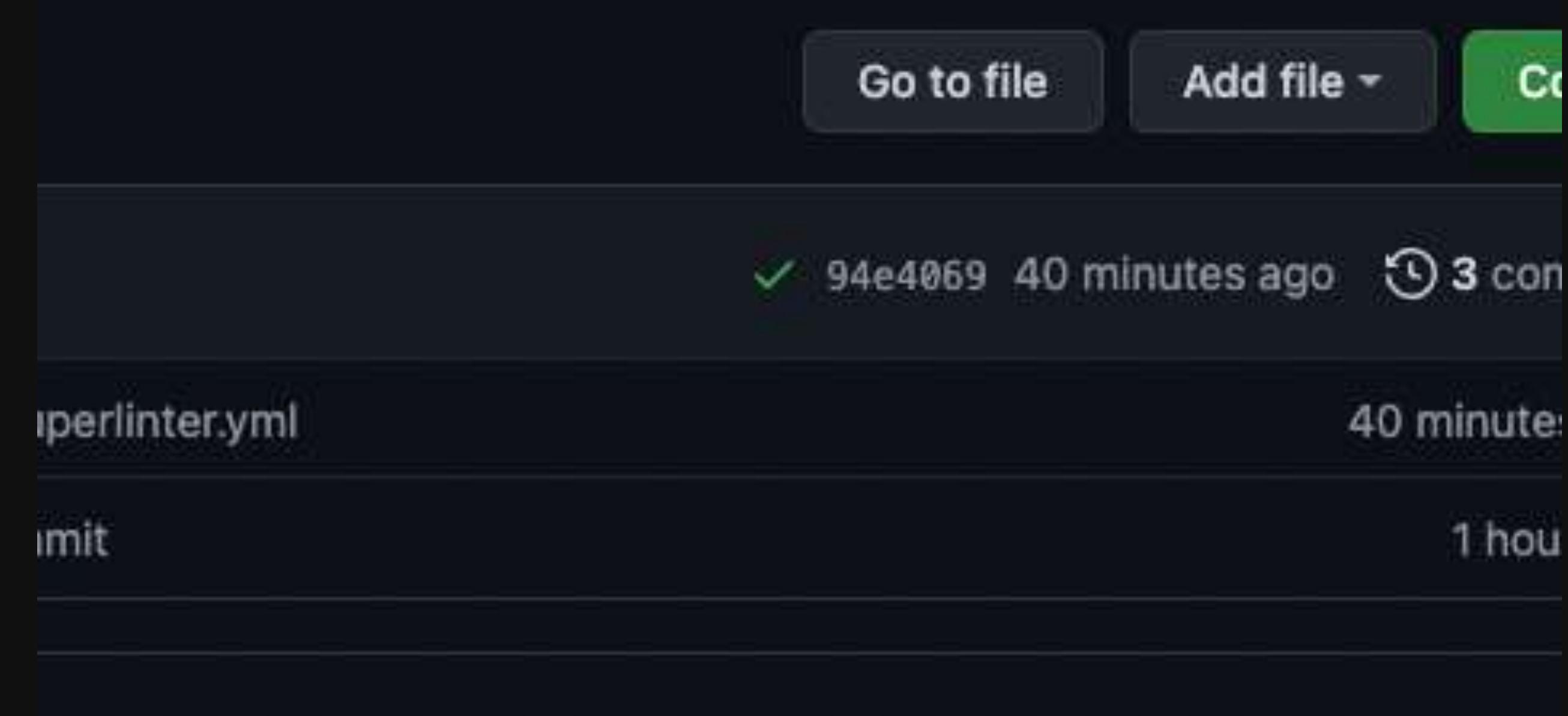
> ✓ Post Checkout code

> ✓ Complete job

ดูรายละเอียดการทำงานได้มาระนี



ดูรายละเอียดการทำงานของ Super-Linter



ขึ้นแบบนี้ถือว่าผ่าน

FirstAction / main.py in main

<> Edit new file ⏷ Preview

```
1 def sayHello():
2     print("Hello World")
3
4 def sayGoodBye():
5     print("Goodbye Ja")
6
```

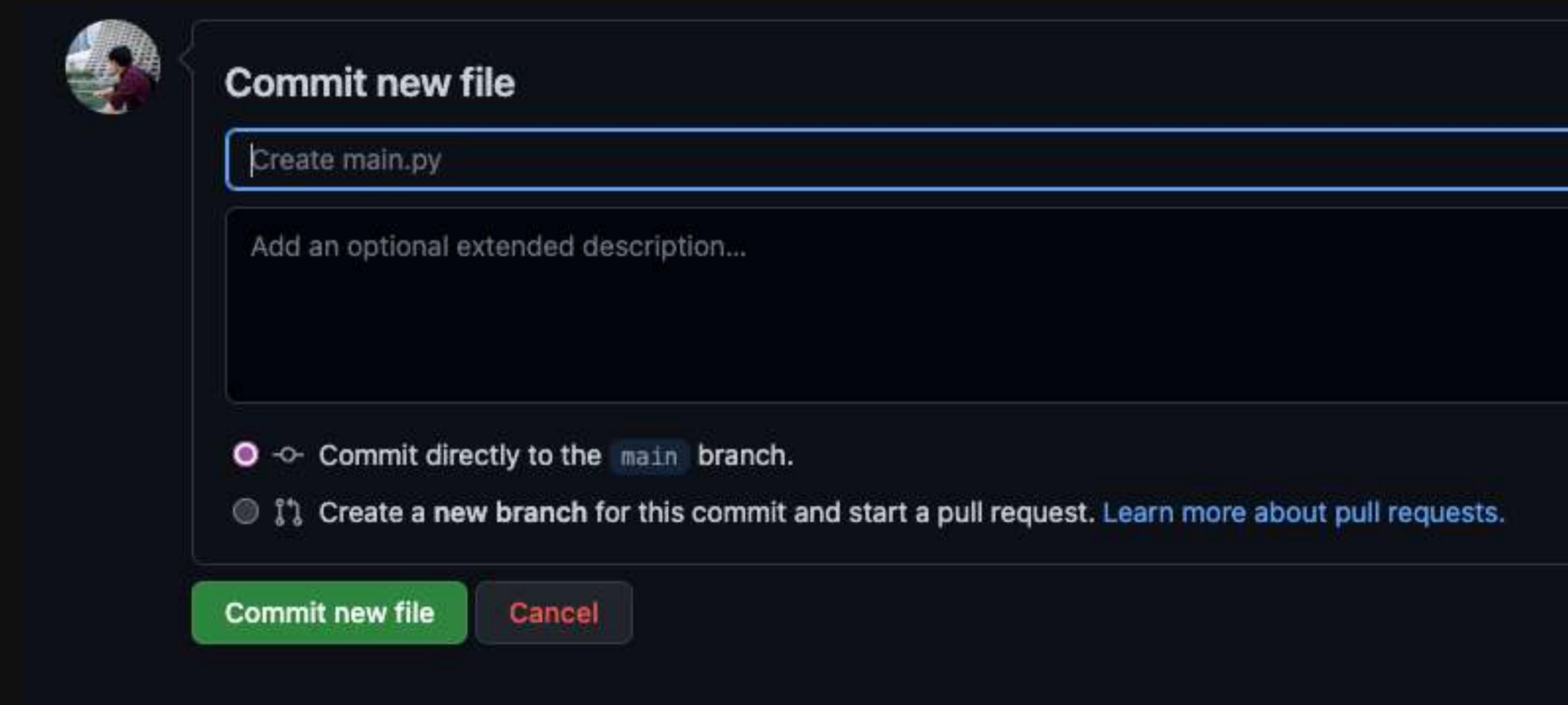
ทำการสร้างไฟล์ใหม่ของ Python

FirstAction / main.py in main

<> Edit new file ⚡ Preview

```
1 def sayHello():
2     print("Hello World")
3
4 def sayGoodBye():
5     print("Goodbye Ja")
6
```

ความแตกต่างคือบรรทัดที่ 2 ใช้ Tab
ส่วนบรรทัดที่ 4 ใช้เว้นวรรค 2 ครั้ง



เมื่อเรียบร้อย ให้เรา Commit ขึ้นไป

The screenshot shows a GitHub Actions interface for a pull request titled "Create main.py #3". The job, named "Super-Linter / Lint code base (push)", is currently in the "Queued" state. The status bar indicates "1 queued check". The "Actions" tab is selected in the top navigation bar. On the left, a dark sidebar displays the repository structure with files like "hub/w", "ADME", "n.py", and "E.md". A message in the sidebar states "Some checks haven't completed yet". The main pane shows the "Summary" of the Super-Linter job, which started 30 seconds ago. The steps listed are: "Set up job" (completed with a green checkmark), "Pull ghcr.io/github/super-linter:v4.9.7" (in progress with a yellow circle), "Checkout code" (not yet run with a grey circle), and "Run Super-Linter" (not yet run with a grey circle).

รอทำงาน

```
178 -----
179 --- /github/workspace/main.py 2022-11-07 09:55:06.614805 +0000
180 +++ /github/workspace/main.py 2022-11-07 09:55:19.442564 +0000
181 @@ -1,5 +1,6 @@
182 def sayHello():
183 - print("Hello World")
184 -
185 +     print("Hello World")
186 +
187 +
188 def sayGoodBye():
189 - print("Goodbye Ja")
190 +     print("Goodbye Ja")
191 would reformat /github/workspace/main.py
192
193 Oh no! ✨ ❤️ ✨
194 1 file would be reformatted.
196 -----
```

ผลลัพธ์ออกมาแล้ววว แสดงให้เห็นด้วยนะ
ว่าตรงไหน Indent ผิด

```
178 -----
179 --- /github/workspace/main.py 2022-11-07 09:55:06.614805 +0000
180 +++ /github/workspace/main.py 2022-11-07 09:55:19.442564 +0000
181 @@ -1,5 +1,6 @@
182 def sayHello():
183 - print("Hello World")
184 -
185 + print("Hello World")
186 +
187 +
188 def sayGoodBye():
189 - print("Goodbye Ja")
190 + print("Goodbye Ja")
191 would reformat /github/workspace/main.py
192
193 Oh no! ✨ ❤️ ✨
194 1 file would be reformatted.
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```

เครื่องหมาย + คือบรรทัดที่เราต้องเพิ่มเข้าไป และ เครื่องหมาย - คือบรรทัดที่เราจะ
ต้องลบออก

```
178 -----
179 --- /github/workspace/main.py 2022-11-07 09:55:06.614805 +0000
180 +++ /github/workspace/main.py 2022-11-07 09:55:19.442564 +0000
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```

ผลลัพธ์ออกมาแล้ววว แสดงให้เห็นด้วยนะ
ว่าตรงไหน Indent ผิด

main ➔ FirstAction / main.py / < > Jump to -

 PrameKittikorn Update main.py

1 contributor

5 lines (4 sloc) | 86 Bytes

```
1 def sayHello():
2     print("Hello World")
3
4 def sayGoodBye():
5     print("Goodbye Ja")
```

ลองอัพเดต แค่ส่วนของ indent 4 space
และ commit ขึ้นไปใหม่

```
179 --- /github/workspace/main.py 2022-11-07 10:06:23.832725 +0000
180 +++ /github/workspace/main.py 2022-11-07 10:06:37.637509 +0000
181 @@ -1,5 +1,6 @@
182     def sayHello():
183         print("Hello World")
184 -
185 +
186 +
```

```
210 2022-11-07 10:06:38 [INFO] -----
211 2022-11-07 10:06:38 [INFO] File: [/github/workspace/main.py]
212 2022-11-07 10:06:38 [ERROR] Found errors in [flake8] linter!
213 2022-11-07 10:06:38 [ERROR] Error code: 1. Command output:
214 -----
215 /github/workspace/main.py:3:1: W293 blank line contains whitespace
216 /github/workspace/main.py:4:1: E302 expected 2 blank lines, found 1
217 -----
218 2022-11-07 10:06:38 [INFO]
219 2022-11-07 10:06:38 [INFO]
```

เรียนรู้ Python หลักส่วนเดียว

Summary

Jobs

Lint code base

succeeded 3 minutes ago in 2m 22s

Run details

Usage

Workflow file

Run Super-Linter

```

1  ▶ Run github/super-linter@v4
2  /usr/bin/docker run --name ghcriogithubsuperlinter497_9b7519 --label 8d5581 --workdir /github/workspace --rm -e "DEFAULT_BRANCH" -e "HOME" -e "GITHUB_JOB" -e "GITHUB_REF" -e "GITHUB_SHA" -e "GITHUB_RUN_NUMBER" -e "GITHUB_RETENTION_DAYS" -e "GITHUB_ACTOR" -e "GITHUB_TRIGGERING_ACTOR" -e "GITHUB_WORKFLOW" -e "GITHUB_HEAD_REF" -e "GITHUB_BASE_REF" -e "GITHUB_EVENT_NAME" -e "GITHUB_REF_NAME" -e "GITHUB_REF_PROTECTED" -e "GITHUB_WORKSPACE" -e "GITHUB_ACTION" -e "GITHUB_EVENT_PATH" -e "GITHUB_ACTION_REPOSITORY" -e "GITHUB_ACTION_REF" -e "GITHUB_PATH" -e "GITHUB_RUNNER_OS" -e "RUNNER_ARCH" -e "RUNNER_NAME" -e "RUNNER_TOOL_CACHE" -e "RUNNER_TEMP" -e "RUNNER_WORKSPACE" -e "ACTIONS_RUNTIME_URL" -e "ACTIONS_RUNTIME_TOKEN" -e "ACTIONS_CACHE_URL" -e "GITHUB_ACTIONS=true" -e CI "/home/runner/work/_temp/github_home":"github/home" -v "/home/runner/work/_temp/github_workflow":"/github/workflow" -v "/home/runner/work/_temp_runner_file_commands":"/github/file_commands" -v "/home/runner/linter:v4.9.7"
3
4
5
6
7
8
9
10
11
12 2022-11-07 10:19:49 [INFO] -----
13
14
15
16
17
18
19
20
21
22
23
24
25
26 2022-11-07 10:19:49 [INFO] --- GitHub Actions Multi Language Linter ---
27 2022-11-07 10:19:49 [INFO] - Image Creation Date:[2022-10-04T14:32:49Z]
28 2022-11-07 10:19:49 [INFO] - Image Revision:[d2ce5e28dbb1260a54f9efe463ed65dcc117894]
29 2022-11-07 10:19:49 [INFO] - Image Version:[d2ce5e28dbb1260a54f9efe463ed65dcc117894]
30 2022-11-07 10:19:49 [INFO] -----
31 2022-11-07 10:19:49 [INFO] The Super-Linter source code can be found at:
32 2022-11-07 10:19:49 [INFO] - https://github.com/github/super-linter
33 2022-11-07 10:19:49 [INFO] -----
34 2022-11-07 10:19:49 [INFO] -----
35 2022-11-07 10:19:49 [INFO] Gathering GitHub information...
36 2022-11-07 10:19:49 [INFO] Successfully found:[GITHUB_SHA], value:[bfca61e2ce08d339c000e8762e12772d6f7bf6f]
37 2022-11-07 10:19:49 [INFO] Successfully found:[GITHUB_WORKSPACE], value:[/github/workspace]
38 2022-11-07 10:19:49 [INFO] Successfully found:[GITHUB_EVENT_PATH], value:[/github/workflow/event.json]
39 2022-11-07 10:19:49 [INFO] Successfully found:[GITHUB_ORG], value:[PrameKittikorn]
40 2022-11-07 10:19:49 [INFO] Successfully found:[GITHUB_REPO], value:[FirstAction]
41 2022-11-07 10:19:49 [INFO] Successfully found:[GITHUB_TOKEN]
42 2022-11-07 10:19:49 [INFO] Successfully found:[GITHUB_REPOSITORY], value:[PrameKittikorn/FirstAction]
43 2022-11-07 10:19:49 [INFO] Successfully found:[GITHUB_RUN_ID], value:[3409450859]
44 2022-11-07 10:19:49 [INFO] -----
45 2022-11-07 10:19:49 [INFO] Gathering user validation information...
46 2022-11-07 10:19:49 [INFO] -----
47 2022-11-07 10:19:49 [INFO] -----
48 2022-11-07 10:19:49 [INFO] Validating ALL files in code base...
49 2022-11-07 10:19:49 [INFO] -----

```

PrameKittikorn / FirstAction (Private)

Code Issues Pull requests Actions Projects Security Insights Settings

Super-Linter

Update main.py #5

Summary

Triggered via push 7 minutes ago

Status Success Total duration 2m 33s Billable time 3m Artifacts

Jobs

Lint code base

Run details

Usage

Workflow file

Lint code base 2m 22s

ເມື່ອແກ້ໄຂເຮືອບ້ອຍ ໄພເຂົ້າວ ຜ່ານຈລຸຍໍຍ

[Code](#)[Issues](#)[Pull requests](#)[Actions](#)[Project](#)

Actions

[New workflow](#)

All workflows

Super-Linter

Management

Caches

Choose a workflow

Build, test, and deploy your code. Make code reviews, branch management, and issue triaging work the way you want. Select a workflow to get started.

Skip this and [set up a workflow yourself](#) →

 Search workflows

Suggested for this repository

Python Package using Anaconda
By GitHub Actions
Create and test a Python package on multiple Python versions using Anaconda for package management.

[Configure](#)

Python

Publish Python Package
By GitHub Actions
Publish a Python Package to PyPI on release.

[Configure](#)

Django
By GitHub Actions
Build and Test a Django Project

Configure

Python

SLSA Generic generator
By Open Source Security Foundation (OpenSSF)
Generate SLSA3 provenance for your existing release workflows

[Configure](#)

Go

Pylint
By GitHub Actions
Lint a Python application with pylint.

[Configure](#)

Python application
By GitHub Actions
Create and test a Python application.

Configure

Python

Deployment

Deploy a Python app to an Azure Web App
By Microsoft Azure
Build a Python app and deploy it to an Azure Web App.

[Configure](#)

Deployment

Deploy to Amazon ECS
By Amazon Web Services
Deploy a container to an Amazon ECS service powered by AWS Fargate or Amazon EC2.

[Configure](#)

Build and Deploy to GKE
By Google Cloud
Build a docker container, publish it to Google Container Registry, and deploy to GKE.

Terraform
By HashiCorp
Set up Terraform CLI in your GitHub Actions workflow.

[Configure](#)

Deployment

Deploy to Alibaba Cloud ACK
By Alibaba Cloud
Deploy a container to Alibaba Cloud Container Service for Kubernetes (ACK).

[Configure](#)

Deployment

Deploy to IBM Cloud Kubernetes Service
By IBM
Build a docker container, publish it to IBM Cloud Container Registry, and deploy to IBM Cloud Kubernetes Service.

[Configure](#)

Tencent Kubernetes Engine
By Tencent Cloud
This workflow will build a docker container, publish and deploy it to Tencent Kubernetes Engine (TKE).

OpenShift
By Red Hat
Build a Docker-based project and deploy it to OpenShift.

[Configure](#)

Deployment

มี workflow ให้เราเลือกแบบจุก ๆ

จักรวาลของเหล่า Developer

กำลังขยายขึ้น ในอัตราเร่งที่มากที่สุดที่เคยมีมา

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สุดยอดเครื่องมือ ที่ไม่มีดีกว่านี้

กับการอัพเดตใหม่ใน 4 หัวข้อหลักของเหล่าเดว

Content Tracks



Cloud

Learn how the best companies, developers, and start-ups are using software in the cloud to accelerate productivity and transform their business.



Security

Hone your security skills by exploring the GitHub tools, techniques, and best practices for securing your software development lifecycle.



AI

See how GitHub, businesses, and the machine learning and AI community build exciting solutions to address current software challenges.

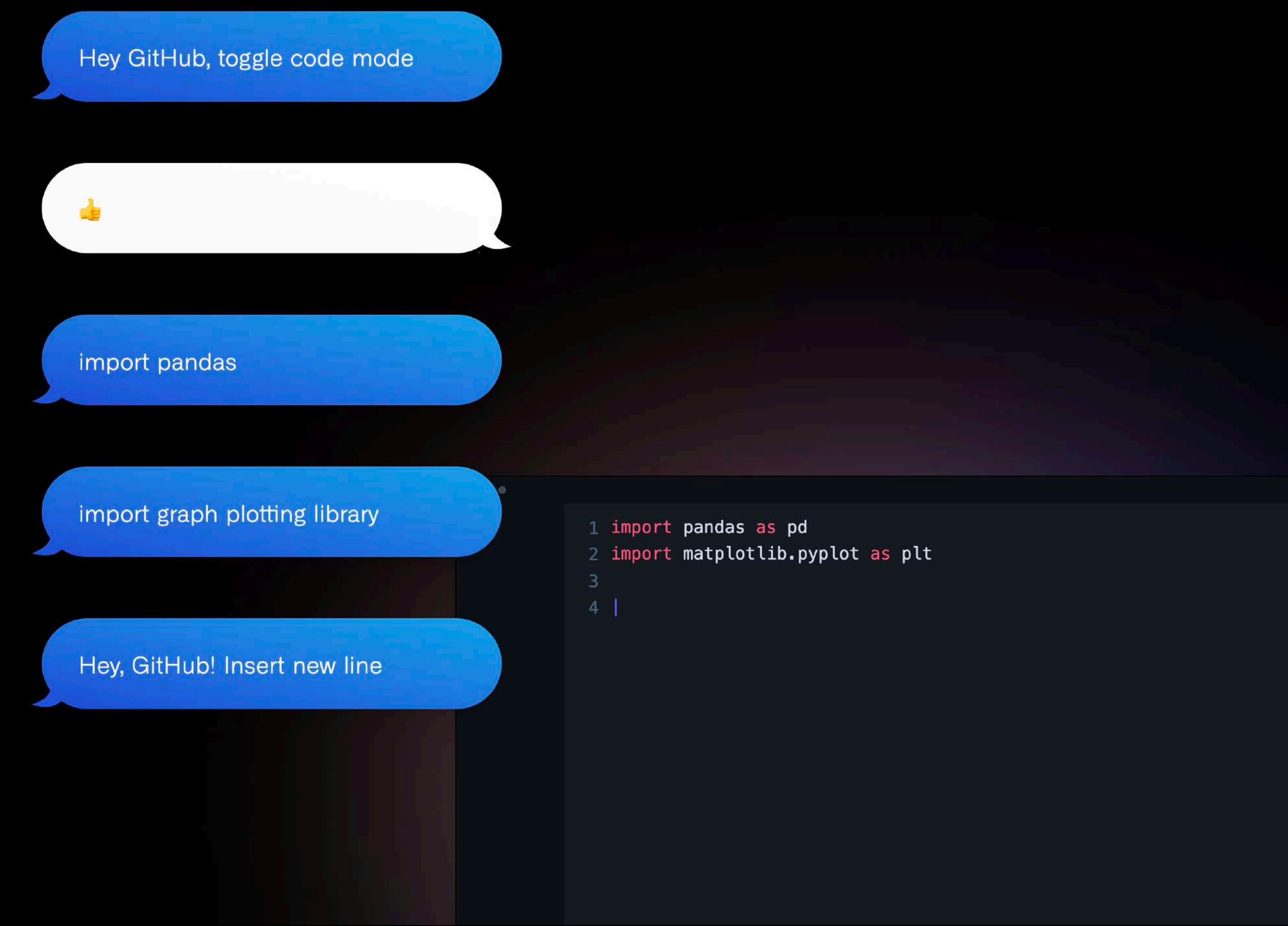


Community

Open Source is the backbone of the world's software, and this track will give you insights into better understanding how it impacts you and your business.

An experiment from GitHub Next

“Hey, GitHub!” enables voice-based interaction with GitHub Copilot, enabling the benefits of an AI pair programmer while reducing the need for a keyboard.

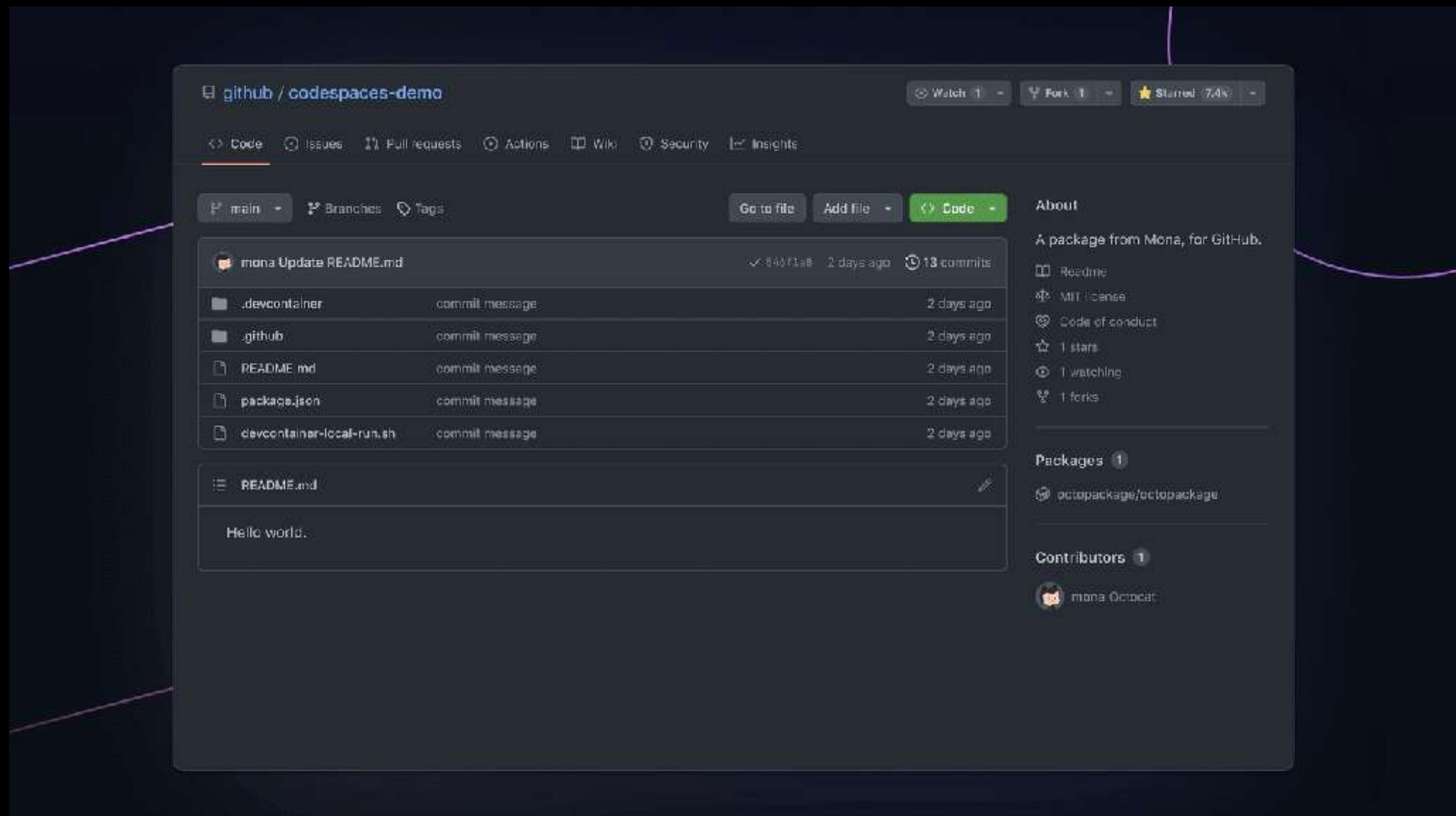


ຈົງ ๆ ແລ້ວຍັງມີອັກຄາຍເຮືອງ

ແຕ່ບວດມາກ່ຽວພະນັກງານຫຼັດ ທີ່ເນັນ ທີ່ກ່ອນນະ !

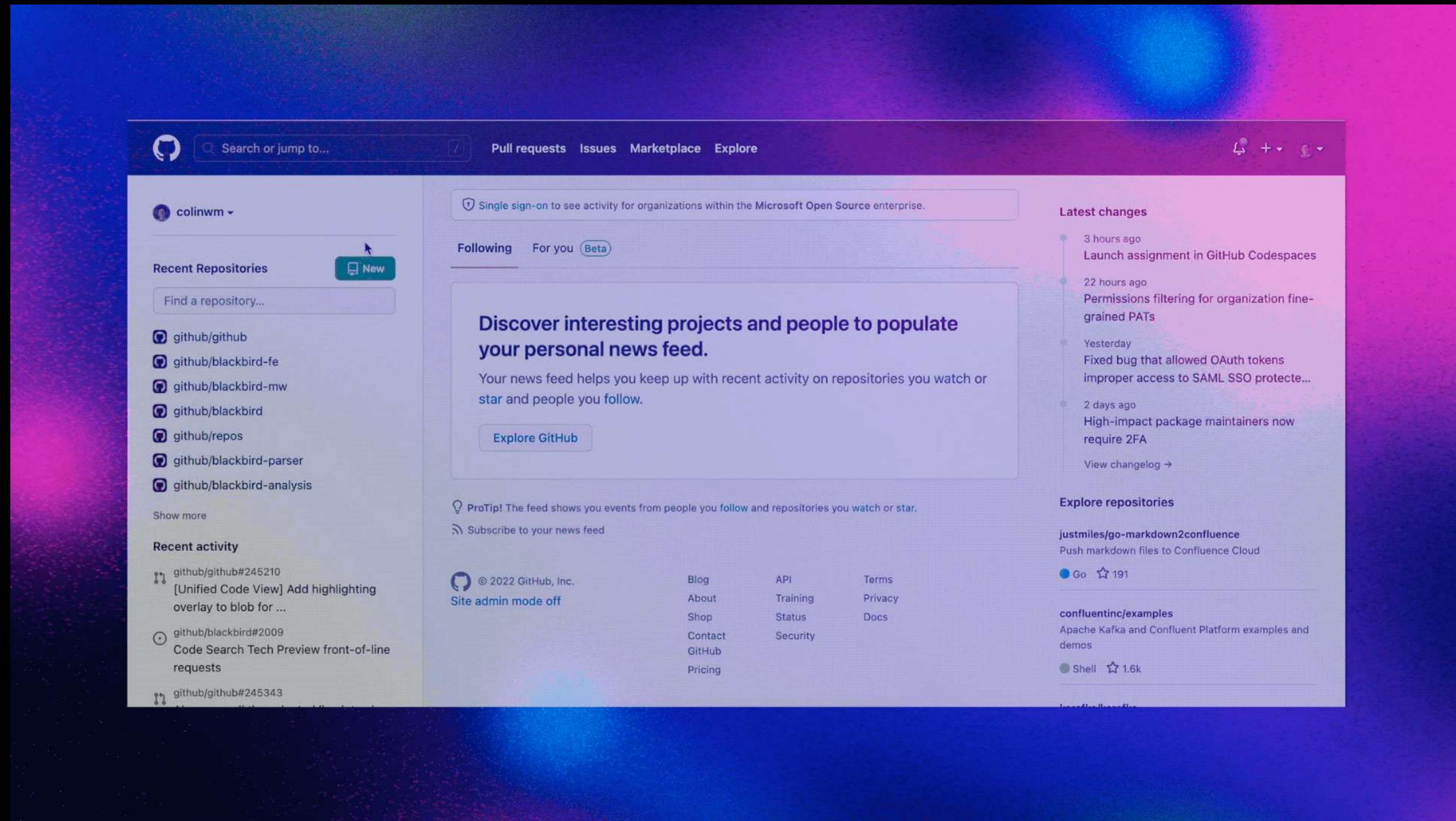
Ready when you are

now, individual developers will get up to 60 hours of GitHub Codespaces for free every month to start building in seconds.



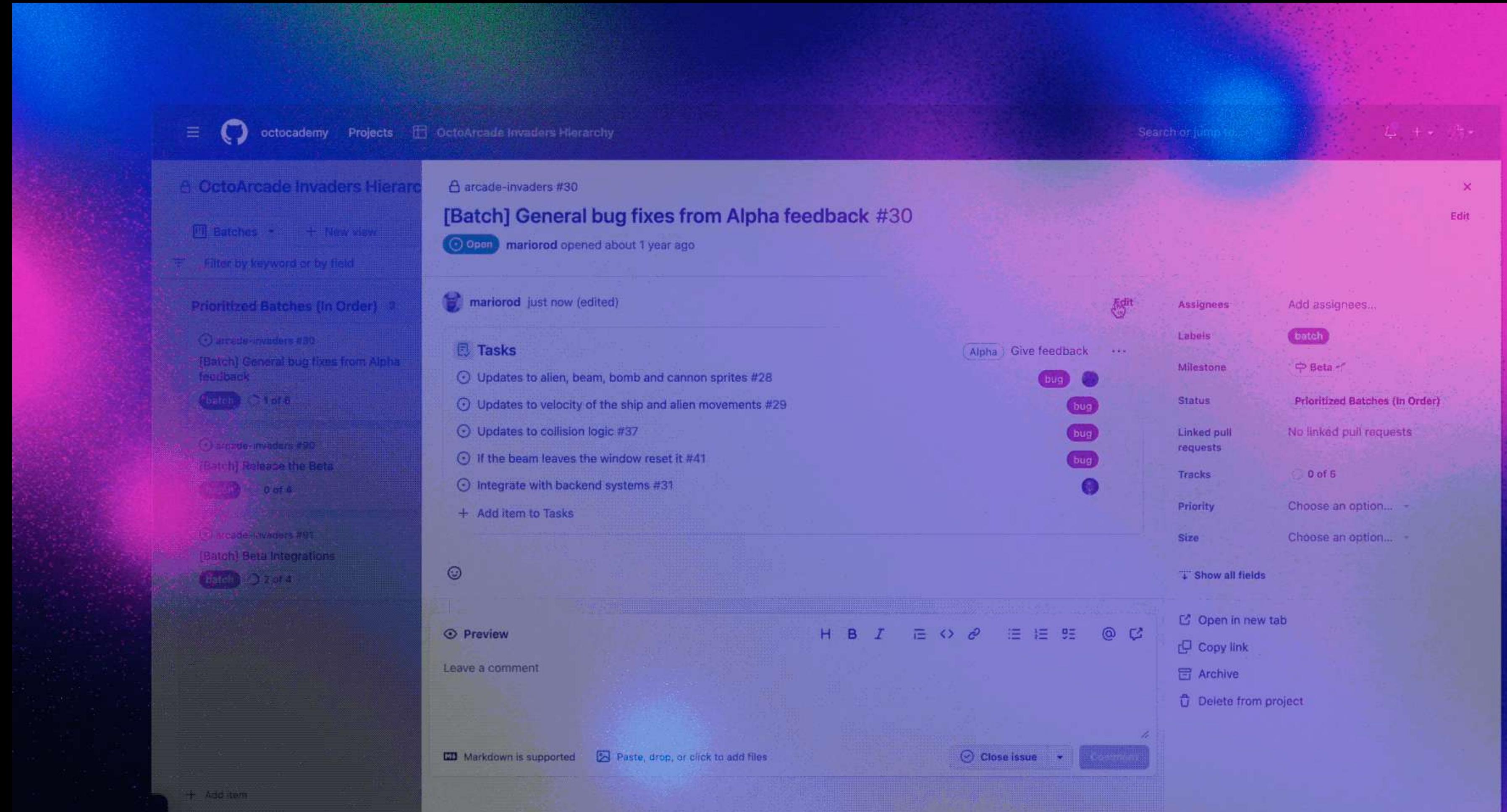
Browsing made better

code search and code view enable you to rapidly search, navigate, and understand code, right from GitHub.com.



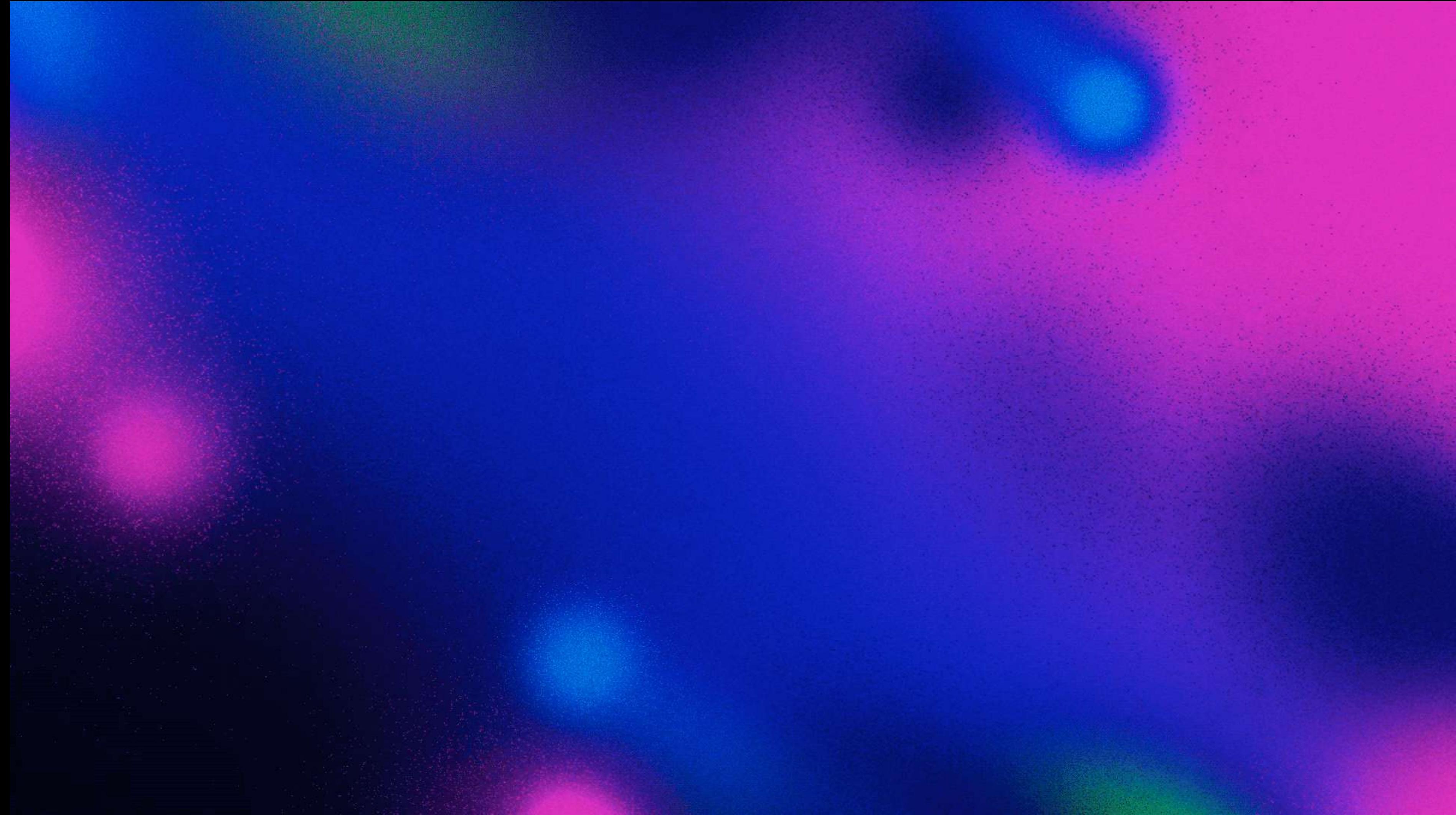
Markdown reimagined

Tasklists decomposes issues into tasks, converts tasks to issues, visualizes your relationships in GitHub Projects, and more—all in a polished, new UI.



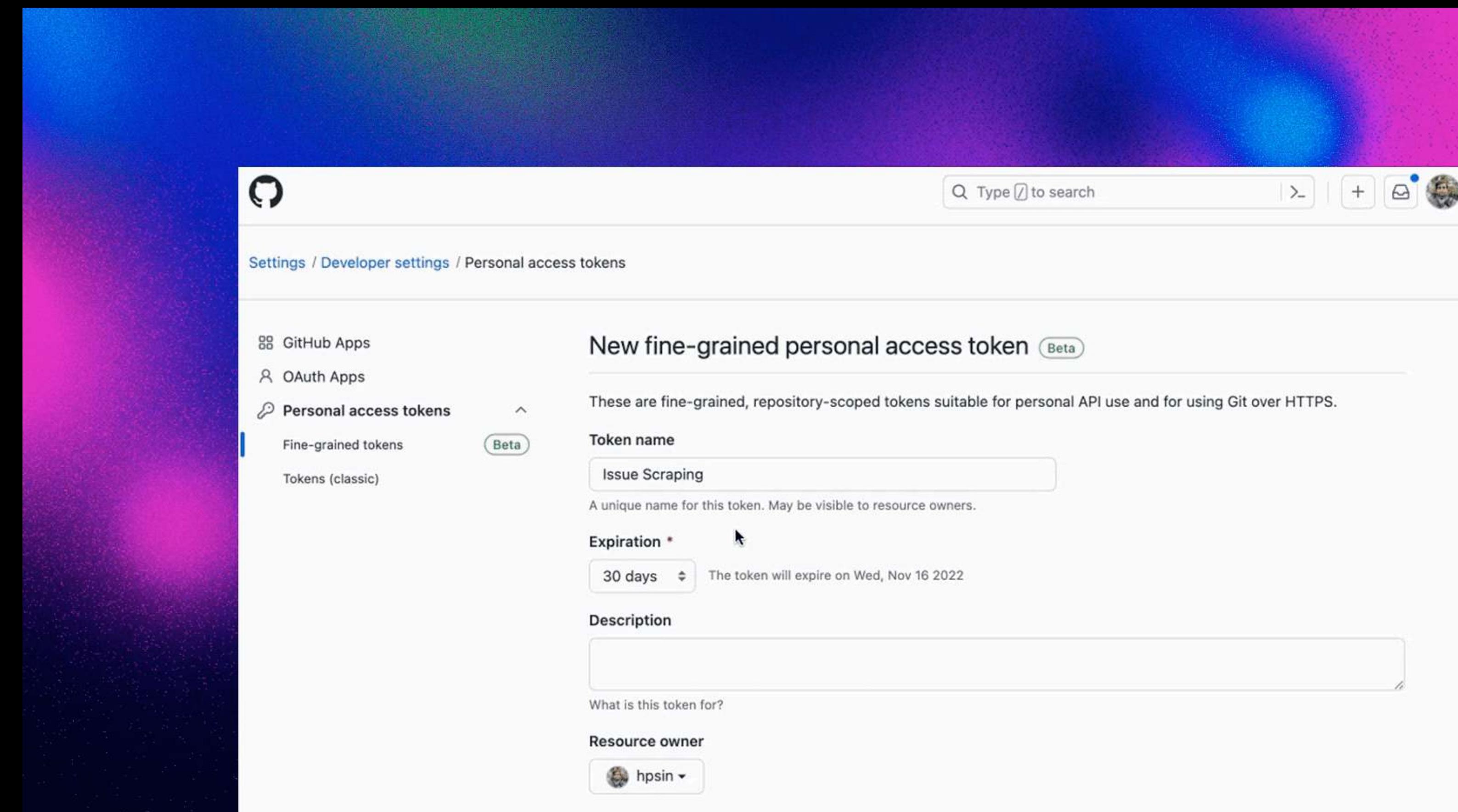
Projects in your pocket

Projects on GitHub Mobile brings the power of GitHub to the palm of your hand, enabling you to contribute and collaborate from anywhere.



Fine-grained goodness

organization admins now have personal access tokens (PATs), along with developers, enabling granular control over permissions and repository access.



ຈົງ ຈ ແລວຍັງມີອັກຫລາຍເຮືອງ

ແຕ່ຂວົດນາກີ່ເພພະເນື້ອຫາເດີດ ຈ ເນັນ ຈ ກ່ວນນະ !



GitHub for Developer

เริ่มต้นจนถึงใช้งานจริงแบบมือโปรดกับเครื่องมือสุดทรงพลัง



5 (2 rating) 12 ผู้เรียน



Kittikorn Prasertsak

อัปเดตเมื่อ 17 Nov 2022



DEV

GITHUB FOR DEVELOPER 🔥

เริ่มต้นจนถึงใช้งานจริงแบบมือโปรดกับเครื่องมือสุดทรงพลัง

เริ่มต้นจนถึงใช้งานจริงแบบมือโปรดกับเครื่องมือสุดทรงพลัง

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ยินดีต้อนรับสมาชิก
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เข้าเรียนต่อ

