**TASK 1 – Flow chart**

END

PRINT Receipt AND Oder confirmation AND Delivery Date

CAL Delivery Date

READ Order Information

CAL Inventory = Inventory - Oder

CAL total price for order

Items available in inventory?

PRINT Items not available

CAL What Items in Oder?

START

No

Yes

**TASK 2 – Pseudocode**

1. **Find if the number is multiple of 5.**

**START**

**INPUT num**

**SET rem = 0**

**rem = num MOD 5**

**IF rem == 0 THEN**

**PRINT “number is multiple of 5.”**

**ELSE  
 PRINT “number is not a multiple of 5.”**

**END**

1. **Check if a character is uppercase or lowercase.**

**START**

**INPUT char**

**IF (char >= “A”) AND (char <= “Z”) THEN**

**PRINT “character is uppercase”**

**ELSE  
 PRINT “character is uppercase or lowercase”**

**END**

1. **Create a small calculator which only does ‘+’ or ‘\*‘Operations. (Hint: Take three variable inputs**

**with one being used for the operator)**

**START**

**SET cal = 0**

**INPUT num1**

**INPUT operator**

**INPUT num2**

**IF operator == “+” THEN**

**Cal = num1 + num2**

**ELSEIF operator == “\*” THEN**

**Cal = num1 \* num2**

**END**

1. **Check whether a given number is positive, negative, or zero.**

**START**

**INPUT num**

**IF num == 0 THEN**

**PRINT “number is zero”**

**ELSEIF num > 0 THEN**

**PRINT “number is positive”**

**ELSEIF num < 0 THEN**

**PRINT “number is negative”**

**END**

1. **Determine if a person is a teenager (between 13 and 19 years old).**

**START**

**INPUT age**

**IF (age >= 13 ) AND (age <=19) THEN**

**PRINT “Is a teenager”**

**ELSE**

**PRINT “Not a teenager”**

**END**

**TASK 3 – Algorithm**

**1. Implement an algorithm to determine if a given year is a leap year. A leap year is divisible**

**by 4, but not divisible by 100, except if it is also divisible by 400.**

1. **Ask the user to enter YEAR**
2. **IF (YEAR MOD 4) is equal to 0 then Display “it is a leap year”**
3. **Else IF (YEAR MOD 100) is equal to 0 then Display “it is not a leap year”**
4. **ELSE IF (YEAR MOD 400) is equal to 0 then Display “it is a leap year”**
5. **END**

**2. Implement an algorithm to count the number of occurrences of each character in a given**

**string.**

1. **Ask the user to enter STRING**
2. **Start loop**
3. **Loop through each character in STRING to count the number of occurrences each character and store it**
4. **When the loop ends print each character with the number of times it occurred in the STRING.**
5. **END**

**3. Write an algorithm to calculate x raised to the power y (i.e., x y ) without using built-in**

**power functions.**

1. **ASK the user for x**
2. **Ask the user for y**
3. **While y > 0**
4. **Ans = Multiply x by x**
5. **y = y – 1**
6. **end while**
7. **print Ans**
8. **END**

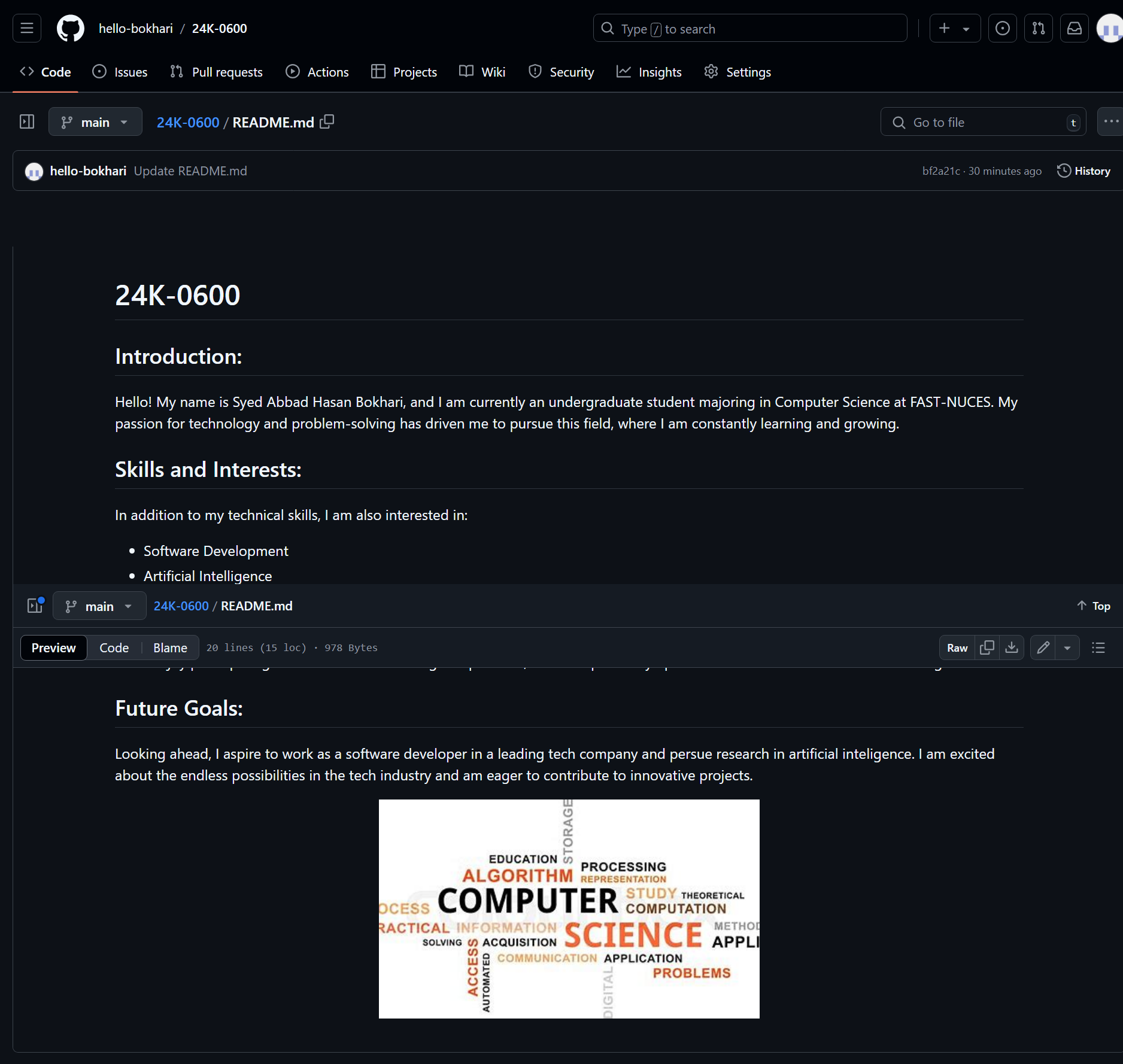
**4. Calculate the area of a circle given its radius r.**

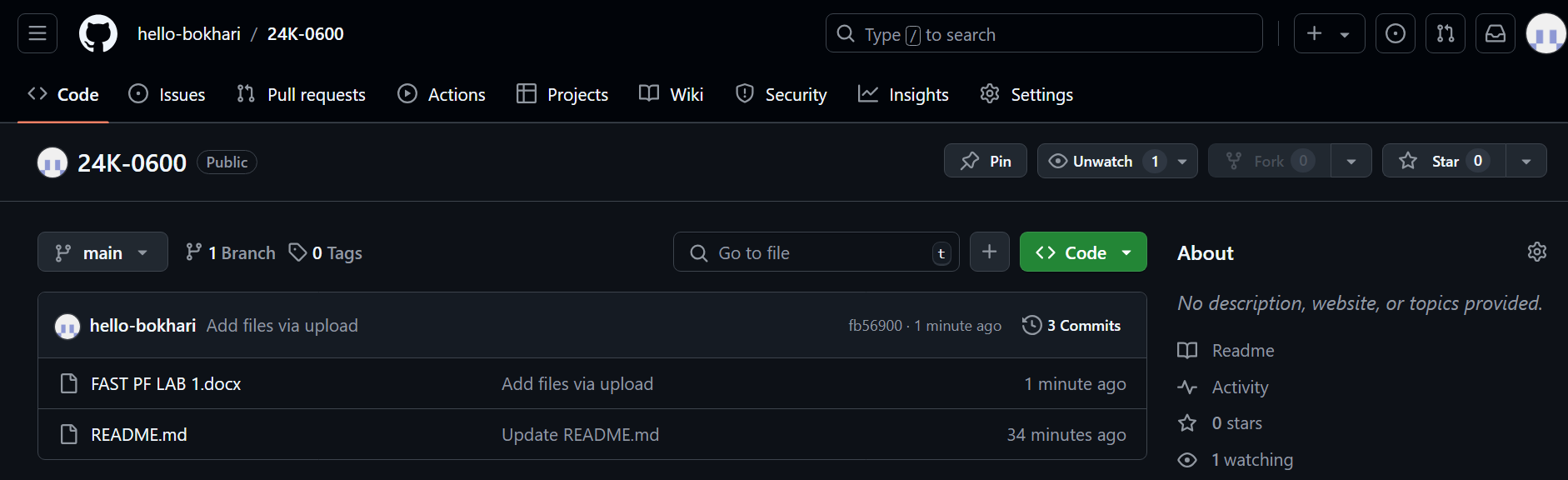
1. **ASK the user for radius**
2. **Set AREA to (3.142\*(radius^2))**
3. **Print AREA**
4. **END**

**5.Find the median of three given numbers.**

1. **ASK the user for NUM1, NUM2, NUM3**
2. **IF NUM2 > NUM1 AND NUM2 < NUM3**
3. **THEN print “NUM2 is median”**
4. **ELSEIF NUM1 > NUM2 AND NUM1 < NUM3**
5. **THEN print “NUM1 is median”**
6. **ElSE print ”NUM3 is median”**
7. **END**

**TASK 4 – GITHUB**

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