

Assignment-1

Note:

If you don't have a laptop then just write your solutions/programs on paper(after solving it on computer). In this case we will check that paper.

In Part 2 of assignment If you are new to Computer Science then correctness of your program isn't necessary.

Don't upload it anywhere, it will be checked offline in class.

Part-1

Find error(s), remove the error(s). If there is error(s) add the comments about what caused the error(s). Write output if there are no error(s).

Q1:

```
fn man() {  
    println("Hello, world!")  
}
```

Q2:

```
fn main() {  
    let chocolate1 = 10;  
    let chocolate2 = 10;  
    const total: u32 = chocolate1 + chocolate2;  
    println!("The sum of x and y is: ",total);  
}
```

Q3:

```
fn main() {  
    let x = 2.5;  
    let y = 3;  
    let z = x * y;  
    println!("{}",z);  
}
```

Q4:

```
fn main() {  
    let radius = 6.0;  
    let perimeter:i32;  
  
    perimeter = 2.0*3.14*radius; // this will calculate to floating points  
    println!("Perimeter of the Circle = {} inches", perimeter);  
}
```

Q5:

```
fn main(){  
    let mut x = "haris";  
    println!("{}",x);  
    x = x.len();  
    println!("{}",x) ;  
}
```

Q6:

```
fn main() {  
    let x = 3;  
    println!("Number {}", x);  
    x = 5;  
    println!("Number {}", x);  
}
```

Q7:

```
fn main() {  
    // Short-circuiting boolean logic  
    println!("true AND false is {}", true && false);  
    println!("true OR false is {}", true || false);  
    println!("NOT true is {}", !true);  
}
```

Q8:

```
fn main() {  
    let interest:f32 = 8;  
    println!("interest is {}",interest);  
}
```

Q9:

```
fn main() {  
    let long_lived_binding = 1;  
  
    // This is a block, and has a smaller scope than the main function  
    {  
        // This binding only exists in this block  
        let short_lived_binding = 2;  
  
        println!("inner short: {}", short_lived_binding);  
        println!("inner short: {}", long_lived_binding);  
    }  
    // Error! `short_lived_binding` doesn't exist in this scope  
    println!("outer short: {}", short_lived_binding);  
    // FIXME ^ Comment out this line  
}
```

Q10:

```
fn main() {  
    let a_binding;  
    {  
        let x = 2;  
        // Initialize the binding  
        a_binding = x * x;  
    }  
  
    println!("a binding: {}", a_bindin);  
}
```

Part-2

Write programs for given statements. Add comments where necessary.

Q1:

A student obtains 95 out of 150 marks in Chemistry. What percentage does he/she scores?

PERCENTAGE:

$$\frac{x}{n} \times 100 = p$$

where:

x = given quantity
 n = total amount
 p = percentage of the quantity
compared to the total

Q-2

Write a program to take input and print it on screen.

Learn about taking input
[here on this link](#)

Q-3

Write a Rust program to print your name, age and mobile number using variables of appropriate data types.

Expected Output:

Name : Alexandra Abramov // Learn about string [here on this link](#)
Age : your total age year in numbers.
Mobile : 999999999

Q-4

Write a Rust program to display multiple variables.

Sample Variables :

Declaration :

```
int a = 125, b = 12345;  
Integer64 ax = 1234567890;  
Integer16 s = 4043;  
float32 x = 2.13459;  
float64 dx = 1.1415927;  
char c = 'W';  
unsigned64 ux = 2541567890;
```

Sample Display

I.e

```
println!("a + c is {}", a + c);  
a + c,  
x + c,  
dx + x,  
a + x,  
s + b,  
ax + b,  
s + c,  
ax + c,  
ax + ux
```

Tip: you may get errors due to calculation of different data types. Try to resolve it through some type casting.

Q-5

Write a Rust program to convert specified days into years and weeks.

Note: Ignore leap year.

Given Data :

Number of days

```
let days:i16 = 1329
```

Expected Output :

Years: 3

Weeks: 33