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 the screen.

Learn about taking input in rust
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 *Variable*s :
***Declaration* :**
int a = 125, b = 12345;
Integer64 ax = 1234567890;
Integer16 s = 4043;
float32 x = 2.13459;
float64 dx = 1.1415927;
char c = 'W';
unsigned64 x = 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