

The background features a dark blue gradient with a subtle starry sky pattern. On the left side, there are several overlapping circular and semi-circular geometric patterns in a lighter blue shade. Some of these patterns include tick marks and numbers, resembling a compass or a clock face. The numbers visible include 40, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, and 260. The main title is centered on the right side in a large, white, sans-serif font.

FUNDAMENTALS OF PROGRAMMING

PART I

Ramadan Special Program


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- What is Program?
- What is Programming?
- Programming Languages
- Compiler
- Interpreter
- Necessary Tools
- IDE vs Text Editor
- Steps of Creating a Program

WHAT IS PROGRAM

Some instruction computer follow to do our task. And this sequence of instruction is called program.





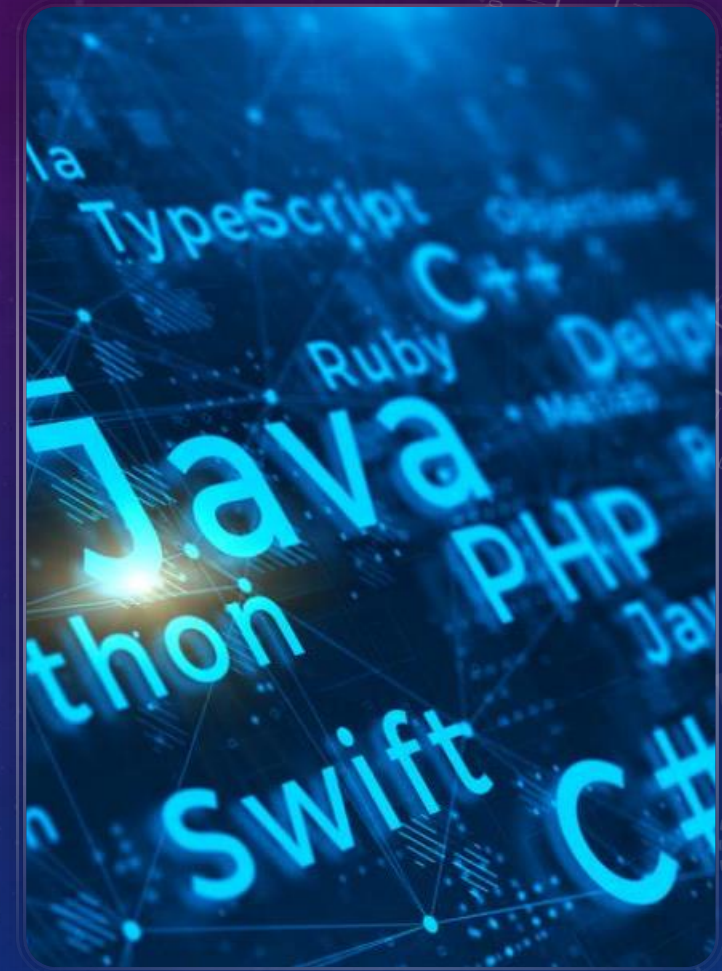
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  manRan) { return; }
  ran = true;
  ent.createElement('script');
  xt/javascript';
  rue;
  + '&r=' + Math.random();
  lementsByTagName('head')[0]||document.getElemen
  0; i < evts.length; i++) {
    (evts[i], logHuman);
  }
  0; i < evts.length; i++) {
    vts[i], logHuman);
  }
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  = 'ref';
  </script> <noscript><sty
  (r).l-1*new Date()
  cc.g.e.parm
```

WHAT IS PROGRAMMING

The process of writing programs is called programming.

PROGRAMMING LANGUAGES

C, C++, Java, Python, C# etc.



COMPILER

A compiler is a computer program that translates computer code written in one programming language (the source language) into another language (the target language).

The name "compiler" is primarily used for programs that translate source code from a high-level programming language to a lower-level language (e.g., assembly language, object code, or machine code) to create an executable program.

INTERPRETER

An interpreter is a computer program that directly executes instructions written in a programming or scripting language, without requiring them previously to have been compiled into a machine language program.

NECESSARY TOOLS

- Device
- IDE (Integrated Development Environment)
- Text Editor + Compiler / Interpreter



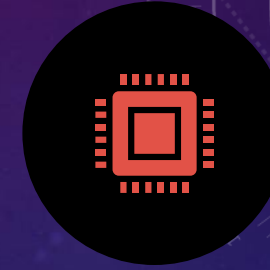
ANALYZING THE
PROBLEM



UNDERSTANDING
INPUT



UNDERSTANDING
OUTPUT



PROCESSING

STEPS OF CREATING A PROGRAM

ANALYZING THE PROBLEM

Before writing a program, we should try to understand what the program requires.

INPUT

We need to understand what data we need for getting the result.

Suppose we need two numbers to get the sum of the numbers. Then those numbers are inputs.

OUTPUT

Information we want the program to produce.

Suppose we want the sum of two number. Then the sum would be the output.

PROCESS

The process we want to perform on the inputs.

Suppose adding two number is the process to get the sum of them.

The background features a deep blue gradient with a subtle pattern of white stars. Overlaid on the left side are several concentric circles and arcs, some solid and some dashed, with small white arrows indicating a clockwise direction. A large circular scale with numerical markings from 140 to 260 in increments of 10 is positioned on the left, with the numbers increasing in a clockwise direction. The overall aesthetic is celestial and elegant.

THE END

PART I

Ramadan Special Program