

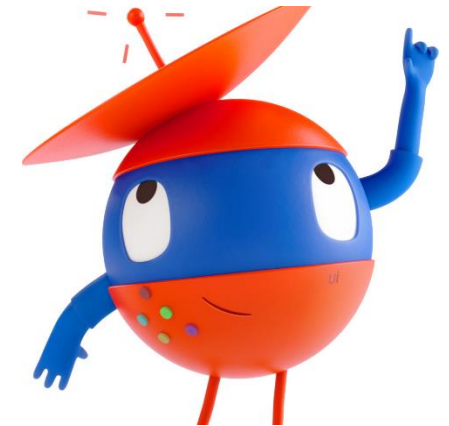
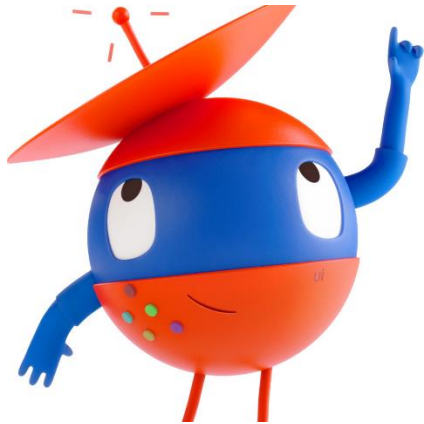


RAMAIAH
Institute of Technology



Introduction to Robotics Process Automation (RPA)

Subject Code: CSE552



Department of Computer Science and Engineering

October-December 2021

UNIT I

PROGRAMMING BASICS:

- Introduction to Programming,
- Data and Data Structure, Algorithms,
- Variables and Arguments,
- Software Application and
- Software Development Life Cycle (SDLC),
- Frameworks and Languages

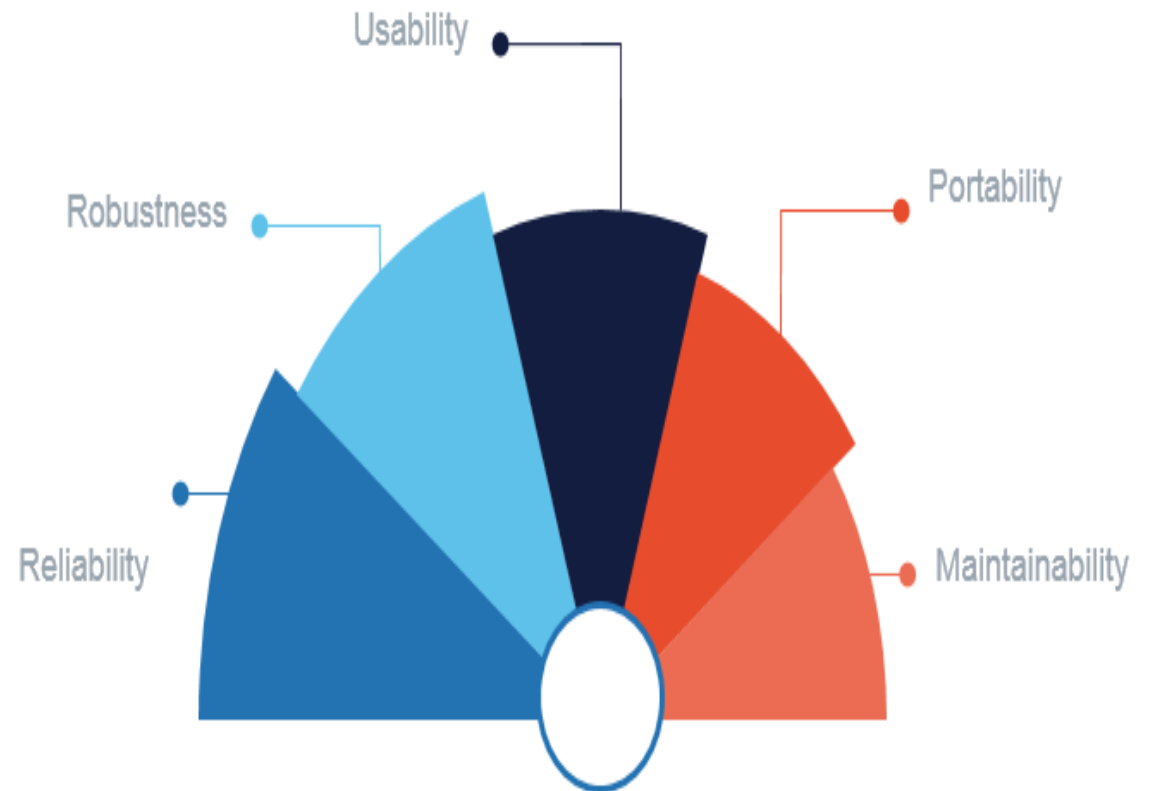
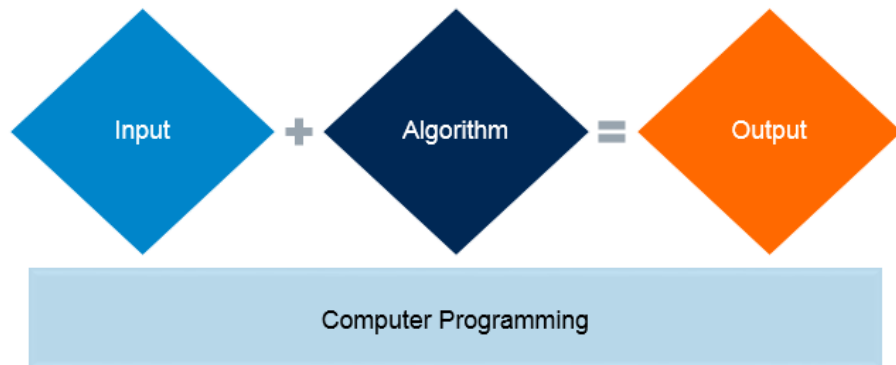
AUTOMATION AND RPA:

- History of Automation,
- Automation and its benefits,
- Introduction to RPA,
- Automation vs RPA,
- Process and Flowchart,
- RPA Programming Constructs,
- Robots in RPA, Introduction to Robots,
- Types of Robots,
- Benefits and Implementation of RPA

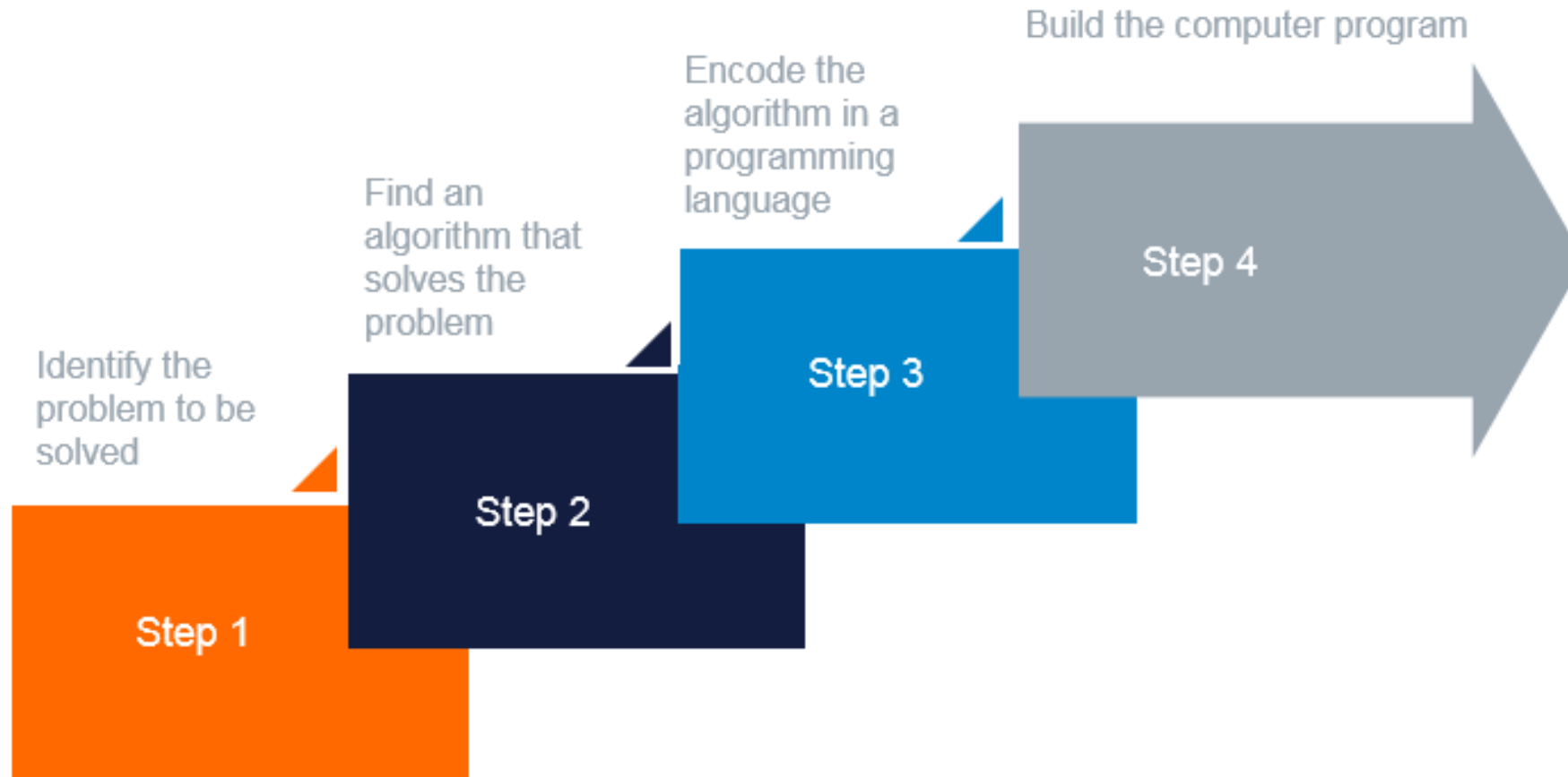
Introduction to Programming

Programming is the process of writing instructions for computer to perform certain tasks. Characteristics of a good program are:

- **Computer program** is sequence of instructions to solve the problem or carry out the task



Steps for Creating a Computer Program



Methods of Programming

Procedural

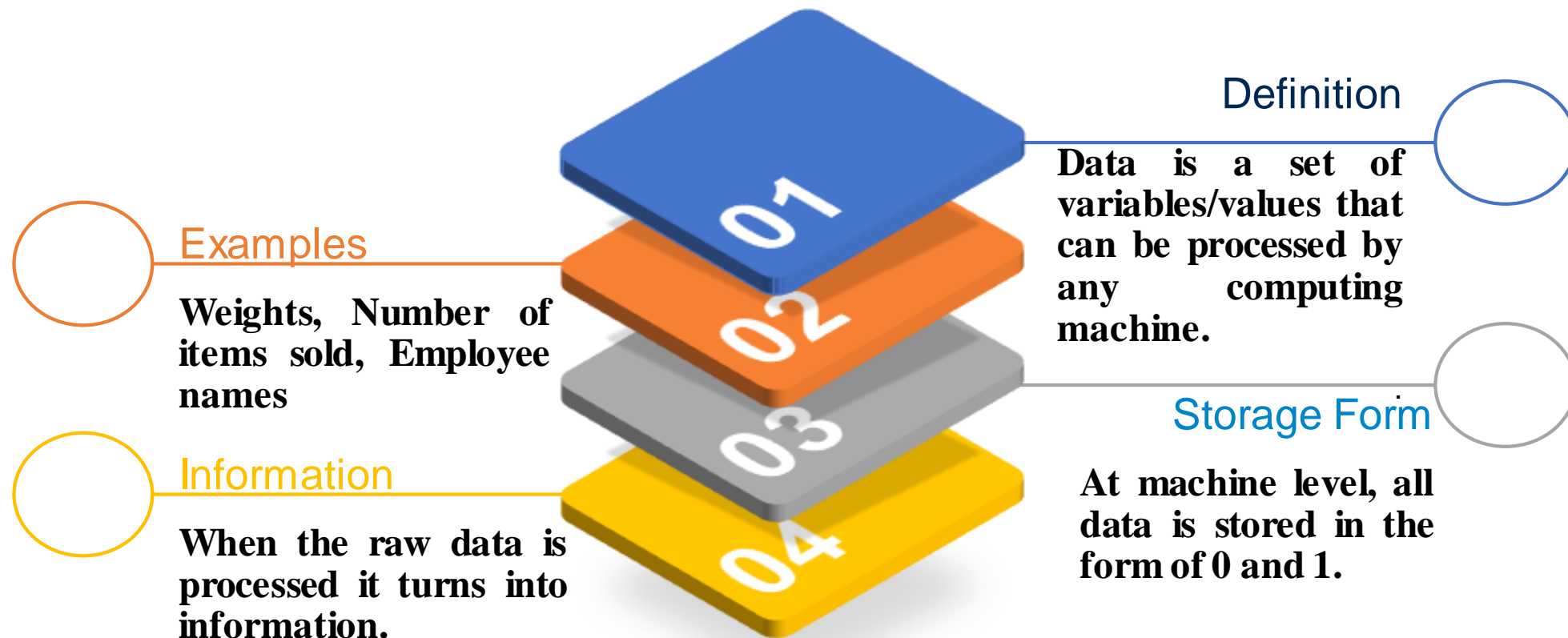
- Defining set of steps to transform inputs into outputs
- Translating steps into code
- Constructed as a set of procedures
- Each procedure is a set of instructions

Object-Oriented

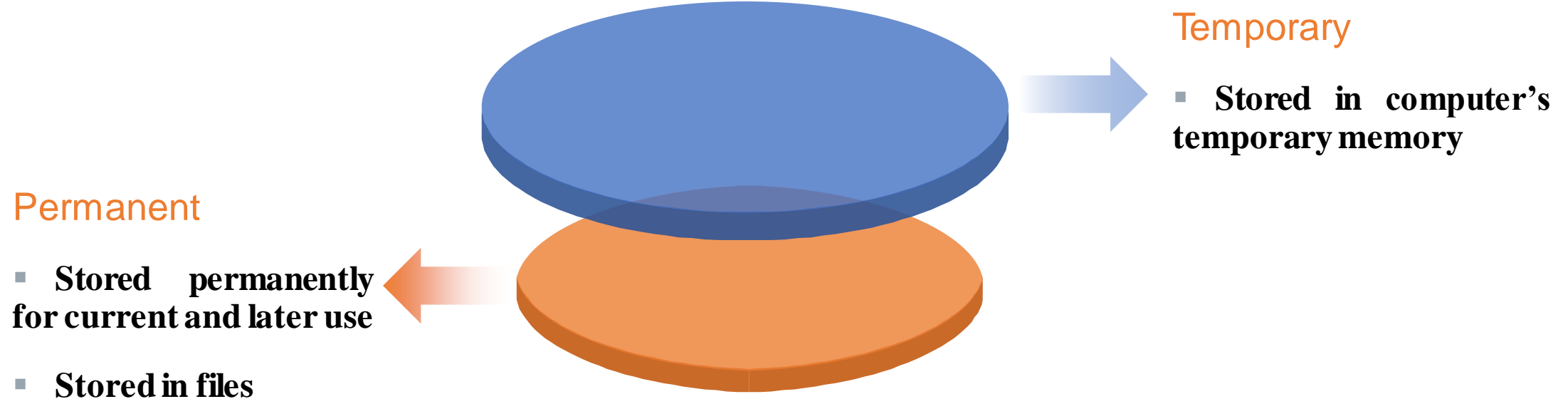
- Defining/utilizing objects to represent real-world entities that work together to solve problem
- Basic O-O Programming Components
 - Class
 - Object/Instance
 - Properties
 - Methods

Data and Data Structure

Data is a piece of digital information. Data is a set of variables/values that can be processed by any computing machine



Data Storage



Data Storage

There are two ways of storing data:

Temporary

- Stored in computer's temporary memory



Volatile memory,

- Example : RAM, or **memory**
- Data **storage** device does not retain its data when the device is unpowered
- operates faster than persistent storage

Permanent

- Stored permanently for current and later use
- Stored in files



Non-Volatile memory,

Persistent storage, is any computer data **storage** device that retains its data when the device is unpowered

SSD/HDD
Memory card

Types of Data

On the basis of structure and uniformity, data can be categorized as:

Structured Data: Its highly organized and easily understood by machine language.

Unstructured Data: it cannot be processed and analyzed using conventional tools and methods.

Structured Data



For example: Spreadsheet, Online forms, airline reservation systems, inventory control, sales transactions, and ATM activity.






Unstructured Data



For example: Email, Data from Facebook, Twitter, LinkedIn.

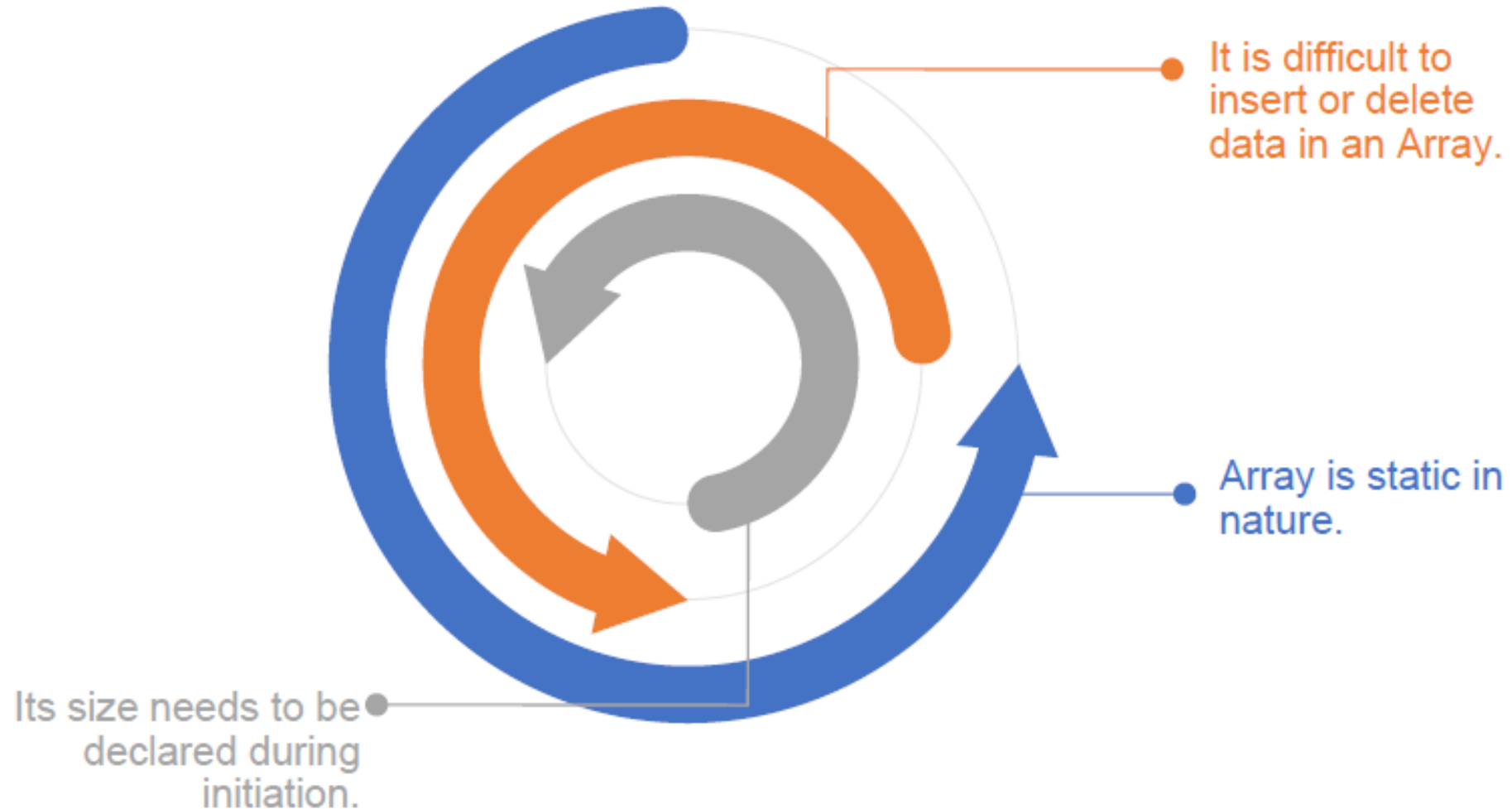
Types of Data Structures

A data structure is a particular way of organizing data. There are five different types of data structures:

- 1  Array
- 2  Linked List
- 3  Stack
- 4  Queue
- 5  Dictionary

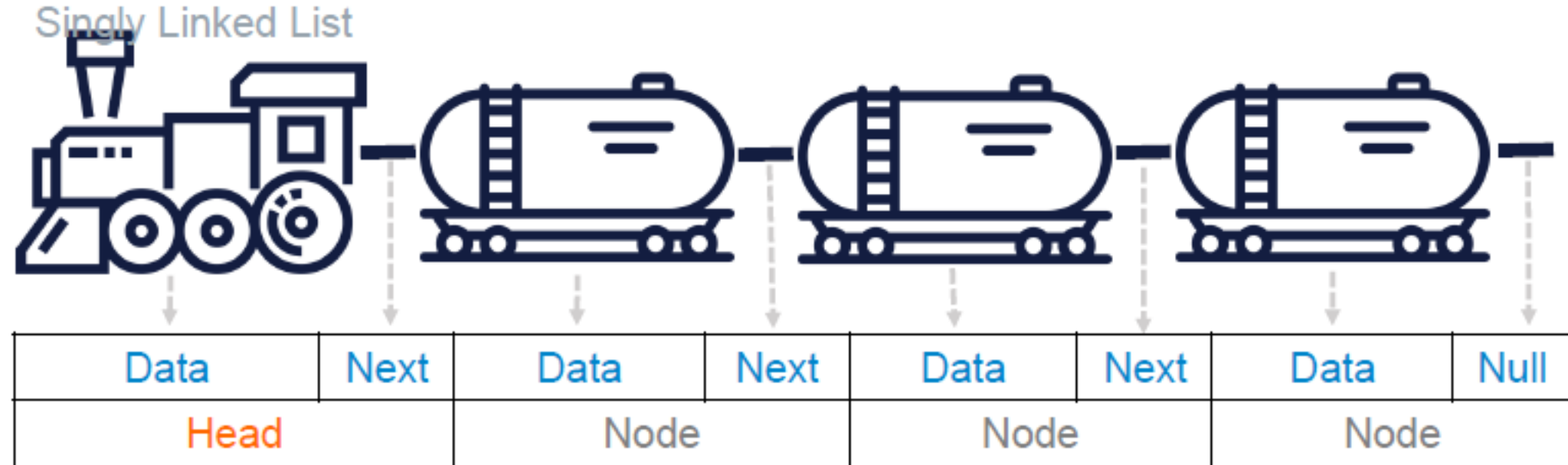
Array

Array is a data structure which stores homogeneous elements at logical locations.



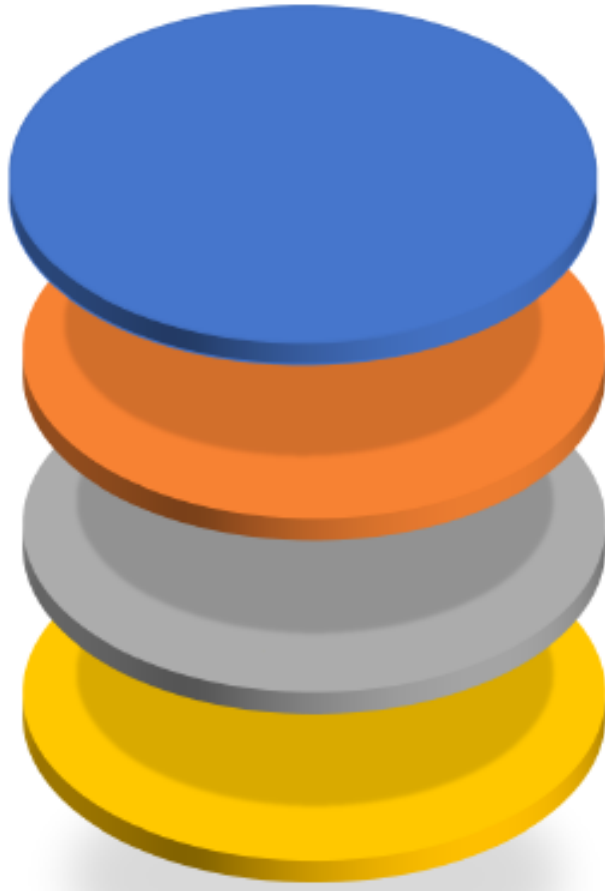
LinkedList

A **Linked List** is a linear data structure containing a set of records linked together by links.



Stack

Consider an example of books stacked over one another in the library.

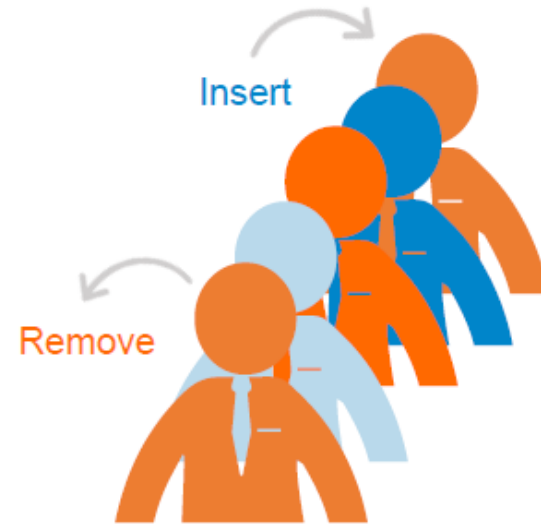


A **stack** is a linear data structure which follows a particular order in which the operations are performed.

This order may be LIFO (Last In First Out) or FILO (First In Last Out).

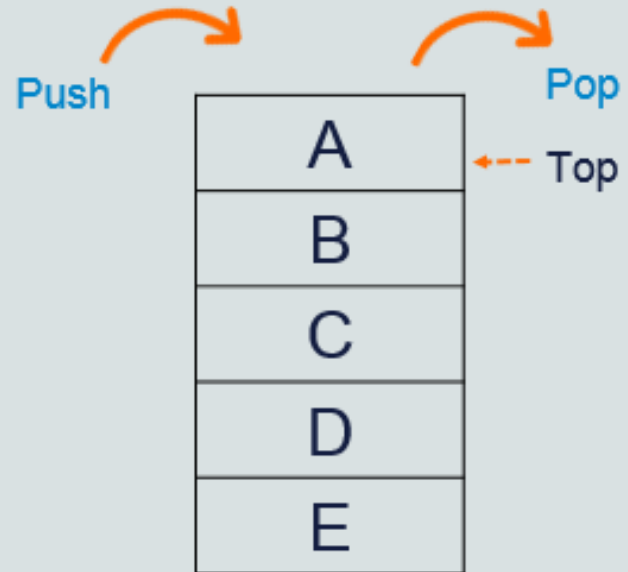
Queue

A **queue** is a linear data structure in which the operations are performed in First In First Out (FIFO) order.

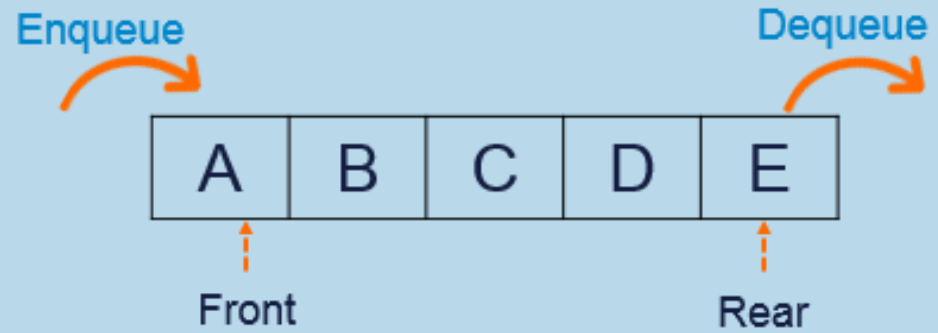


Can you give a real life example of a Queue structure?

Stack vs. Queue



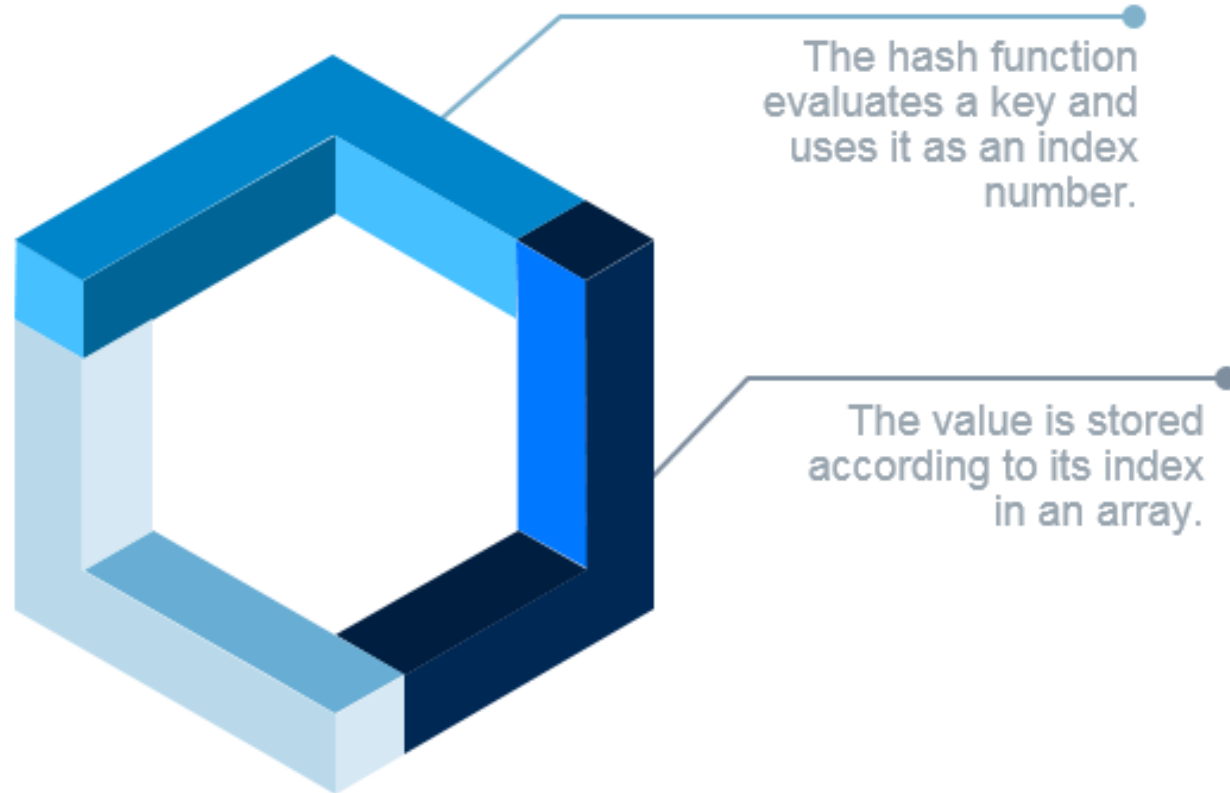
Stack



Queue

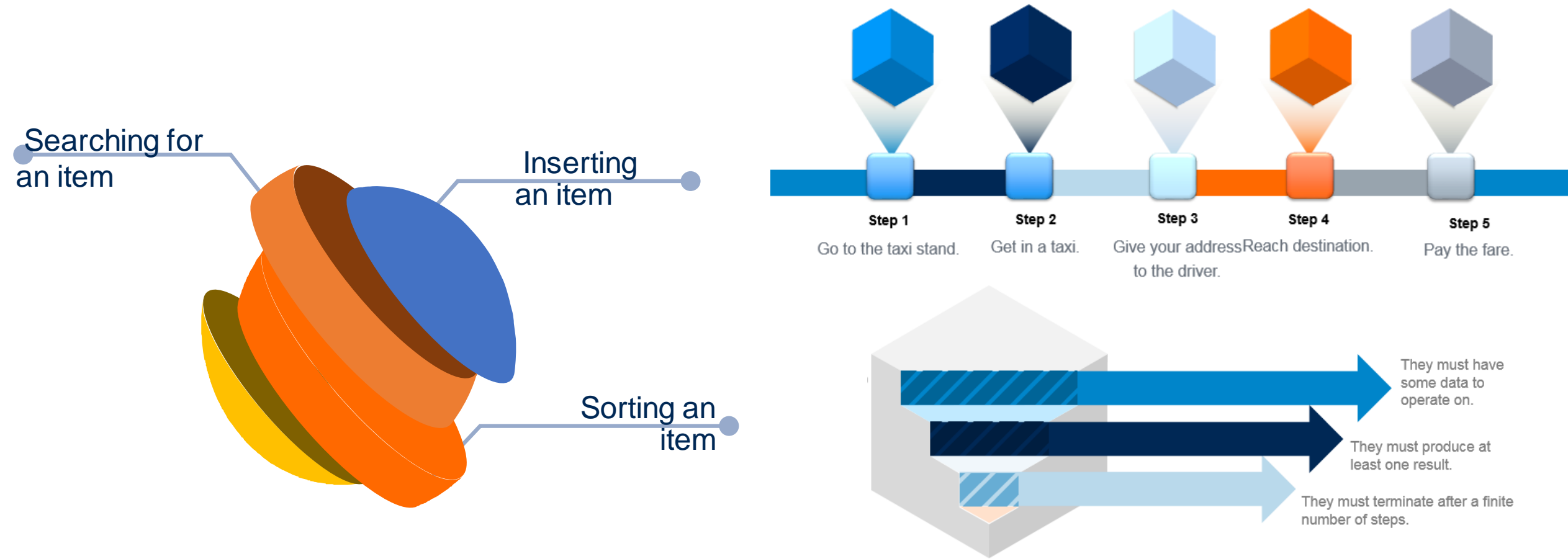
Dictionary

A dictionary consists of a key and a value.



Algorithm

- Algorithms are used to link data structures together to create a program that solves a certain task. They are also used to manipulate data in various ways, such as:
- Algorithms can be associated with things that we do in our daily life. An example of an algorithm for a taxi ride is as follows:



Types of Algorithms

Algorithms are divided into following generic categories:



Searching



Sorting



Compression



Parsing



Encoding



Geometric



Pattern
Matching

Algorithm Exercise

Think about ways of using algorithms to solve basic tasks.



1. Which algorithm will be faster in sorting numbers between 1 and 10?

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

2. Which algorithm will be the faster in sorting 1 million book titles?



UiPath stack

UiPath Studio

- UiPath Studio helps users with no coding skills to design Robotic processes in a visual interface. It is a flowchart-based modeling tool. Thus, automation is faster and more convenient. Multiple people can contribute to the same workflow.

UiPath Robot

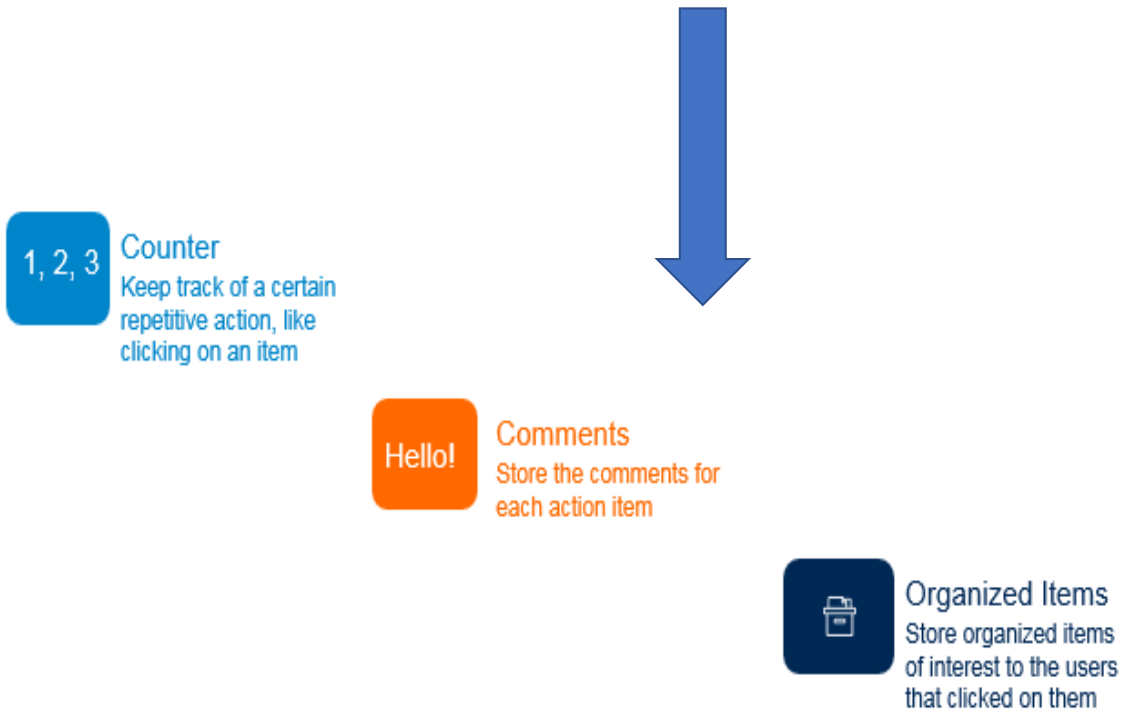
- UiPath Robot runs the processes designed in UiPath Studio. It works in both attended (working only on human trigger) and unattended environments (self-trigger and work on their own).

UiPath Orchestrator

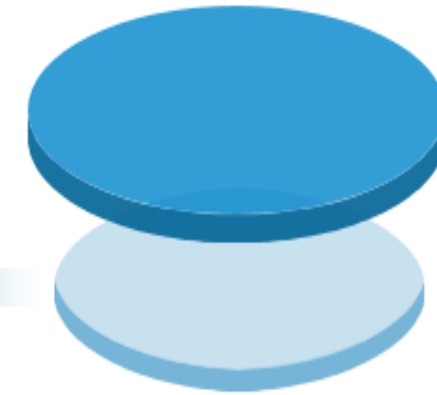
- UiPath Orchestrator is a web-based platform that runs and manages Robots. It is capable of deploying multiple Robots, and monitoring and inspecting their activities.

Variables and Arguments

- **Variables are storage containers for data that can be used later throughout the program.**

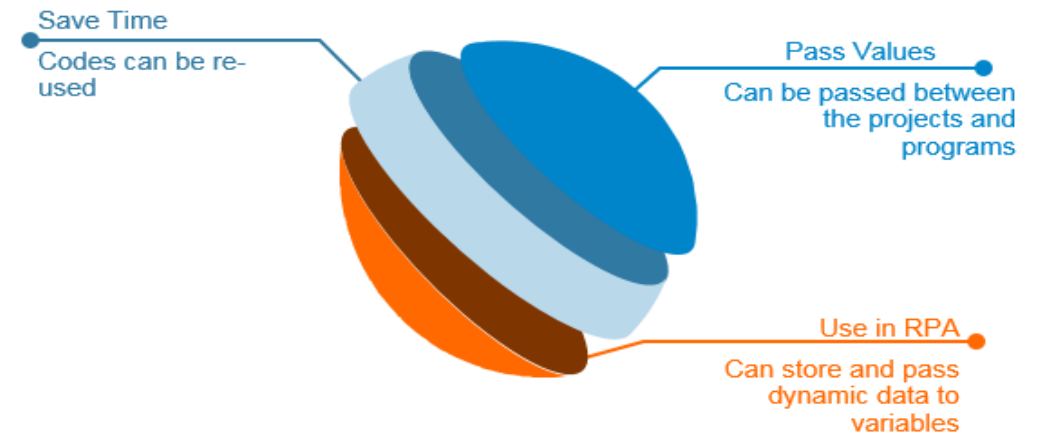


The In/Out properties within the argument tell the application where the information stored in them is supposed to go.



Arguments appear when the process that is supposed to be automated is split into multiple parts/multiple files.

- **An argument is a variable than can store a value which can be used later to pass values between files.**
- **Arguments are used in breaking up large bits of code into smaller re-usable bits of code.**



Arguments appear when the process that is supposed to be automated is split into multiple parts/multiple files.

- **Arguments are used to pass data from one file to another.**
- Variables cannot be used with this scope.
- Managing arguments is similar to managing variables.
- The main difference is that, as the arguments have a direction, “In” or “Out”, you need to ensure that the direction is a correct one.
- The In/Out properties within the argument tell the application where the information stored in them is supposed to go.

Variable and Arguments are quite similar but they have certain distinctions in their properties

- Both act as a storing container but have different properties.
- The main difference is that, as the arguments have a direction, “In” or “Out”, you need to ensure that the direction is a correct one. The In/Out properties within the argument tell the application where the information stored in them is supposed to go.

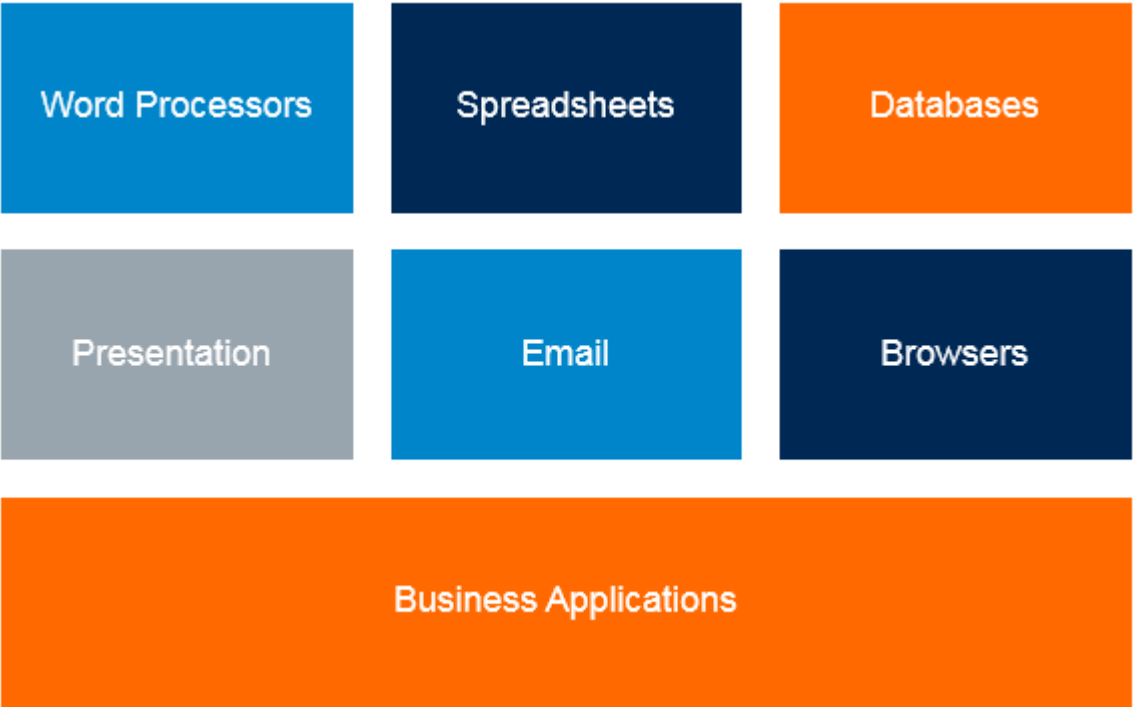
Software Application

- An application is a **computer software package that performs a specific function** directly for an end-user or for another application



Application Software		
Word Processing	Spreadsheets	Presentations/ Web Browsers
Gaming	E-mail	Databases
System Software		
File Management Tools	Operating System	Utilities

- Based on the usage of the software, **personal productivity applications** can be categorized into many types, such as:



Business applications are the software applications that are generally used in business to accomplish business related tasks, such as:

CRM: Customer Relation Manager

HRM: Human Resource Manager

ERP: Enterprise Resource planning

DMS: Document Management System

MIS/BI: Management Information System, Business Insight

WFMS: Workflow Management System

Software Development Life Cycle (SDLC)



How Projects Really Work (version 1.5)

Create your own cartoon at www.projectcartoon.com



How the customer explained it



How the project leader understood it



How the analyst designed it



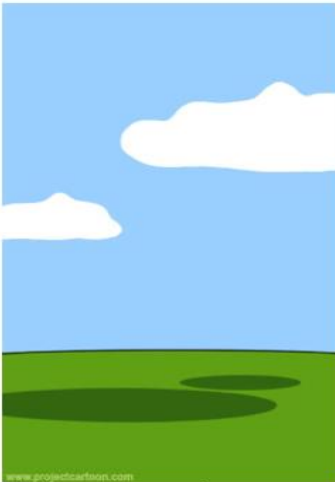
How the programmer wrote it



What the beta testers received



How the business consultant described it



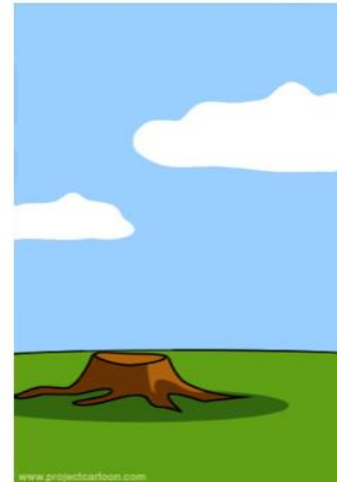
How the project was documented



What operations installed



How the customer was billed



How it was supported

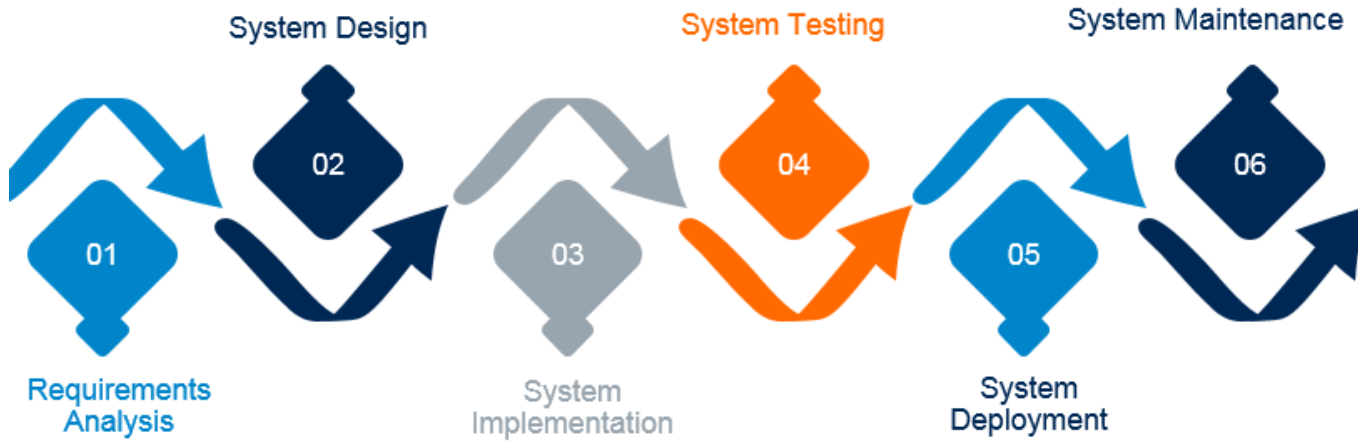


What marketing advertised

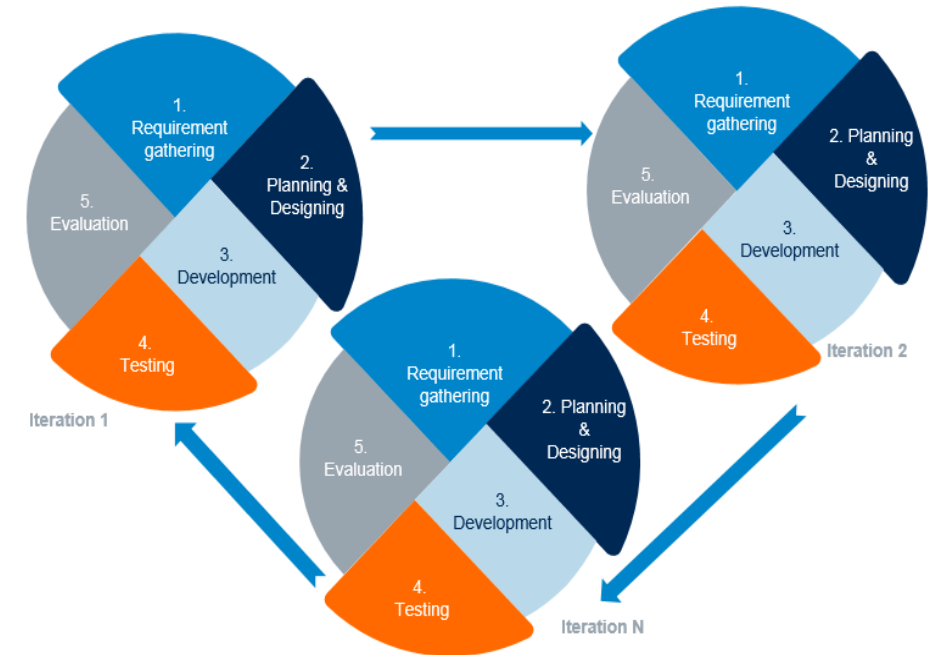


What the customer really needed

Waterfall Model



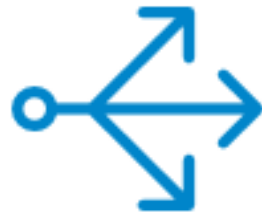
Agile Model



Waterfall Vs. Agile

Waterfall

- The steps are defined in advance and followed sequentially
- The success criteria are established at the beginning
- Each step must finish before the next one can begin
- Follows 'Plan everything first' approach



Agile

- The process starts with Discovery Sessions to understand the business and RPA
- Iterative approach
- Suitable for frequent changes to ensure a prompt response time

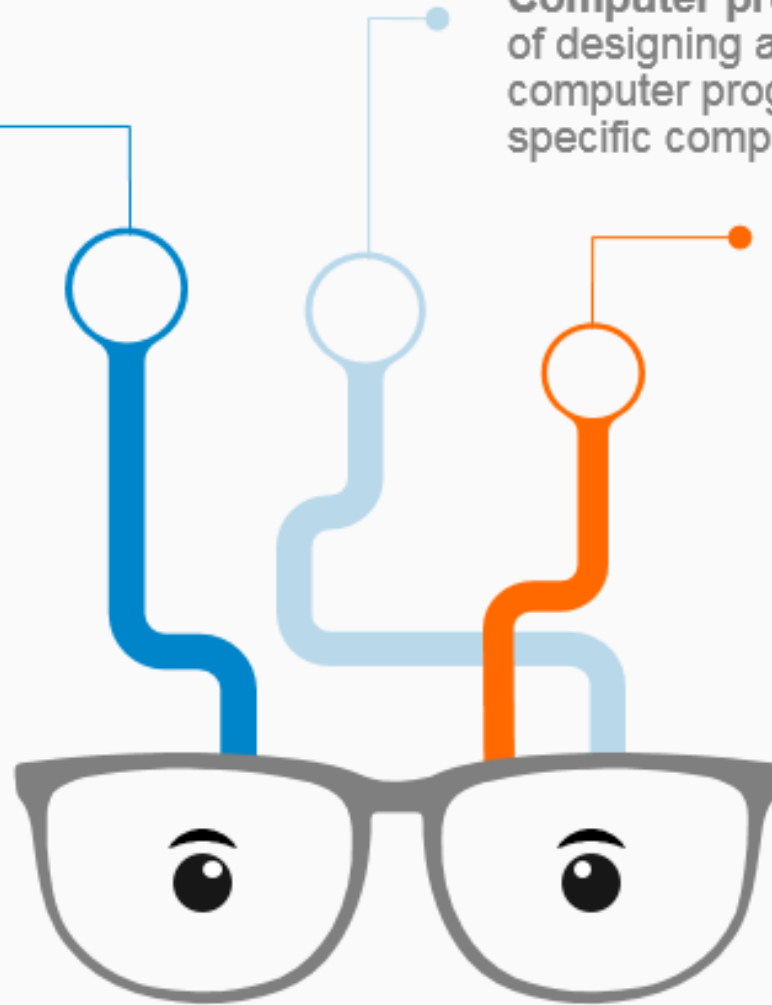


Software Applications, Programming, Data Structures

An **application** is a computer software package that performs a specific function directly for an end user or for another application.

Computer programming is the process of designing and building an executable computer program for accomplishing a specific computing task.

A **data structure** is a particular way of organizing data in a computer so that it can be used to resolve a given problem faster and more reliable.

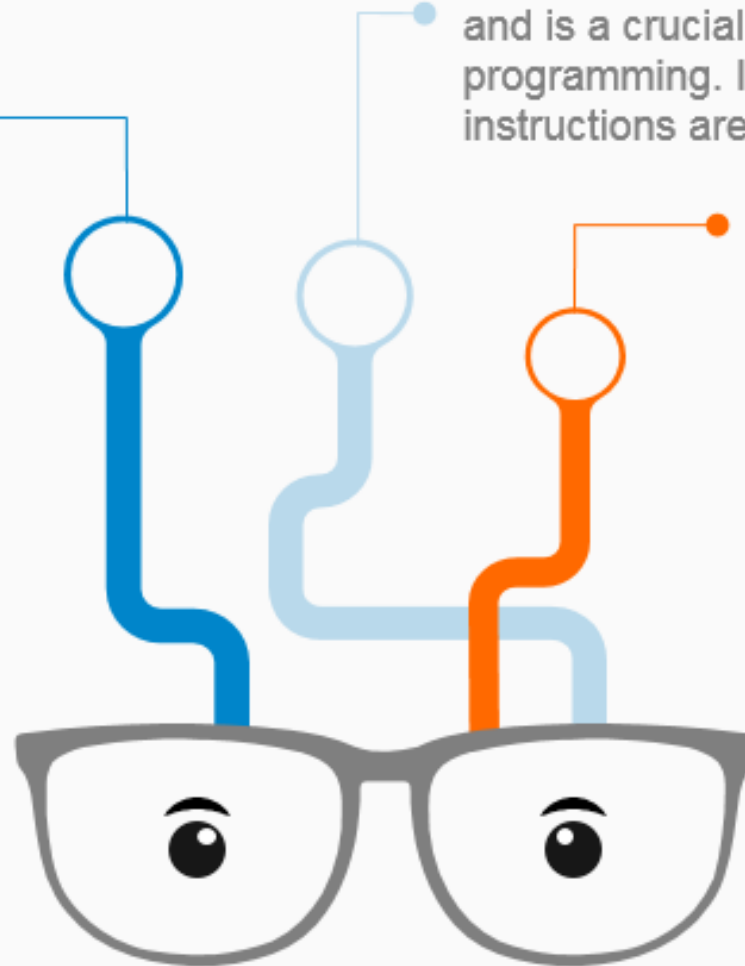


Algorithms, Sequence Flow, SDLC

Algorithms are step by step methods of solving a problem. They are used for data processing, calculation and other computer and mathematical operations.

Flow chart depicts flow of a program and is a crucial concept in programming. It is the order in which instructions are executed.

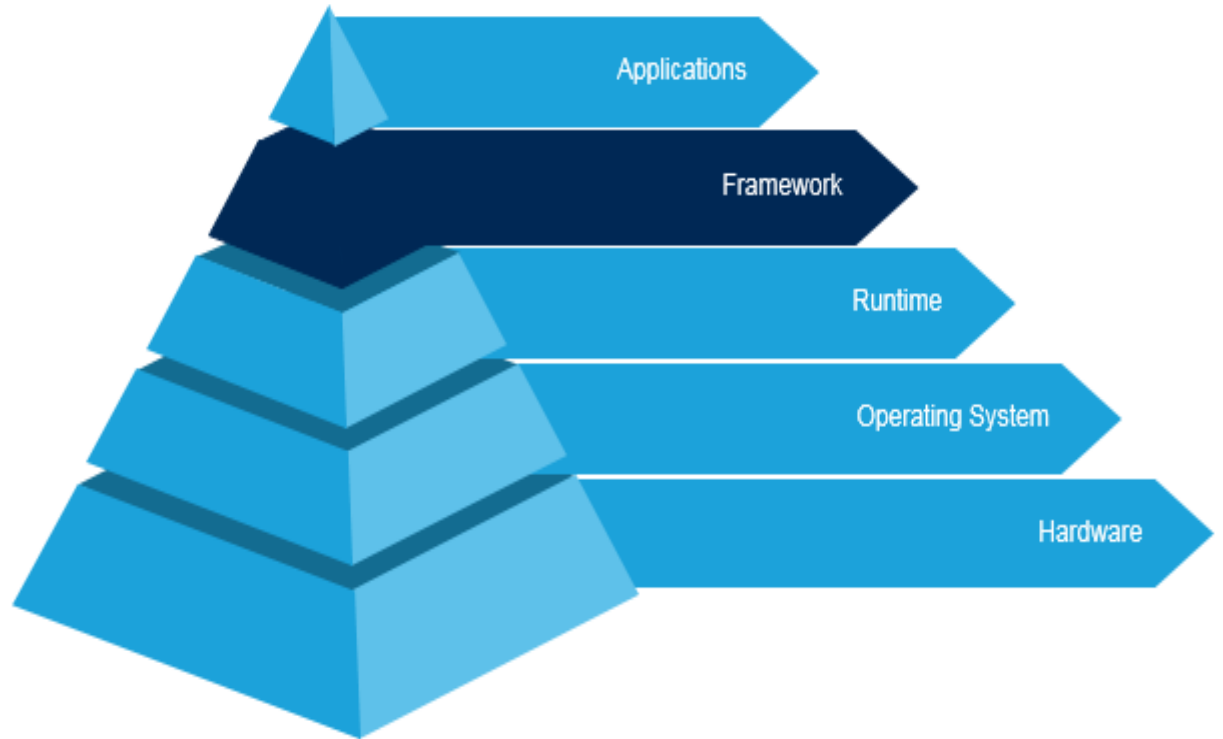
Software Development Life Cycle consists of various steps that are covered from the initiation of any project to the completion of the project.



Frameworks and Languages

A framework is a platform that provides support for building and running applications through built-in functions and libraries.

- .NET Framework is a programming framework that enables developers to easily use other applications on top of it.
- It provides a foundation on which all software developers can build their own programs or selectively change the functionality of programs by additional user-written code.
- The Common Language Runtime is the virtual component within the .NET Framework that manages the execution of .NET programs.



The **.NET Framework** is designed to carry out the following specific objectives:

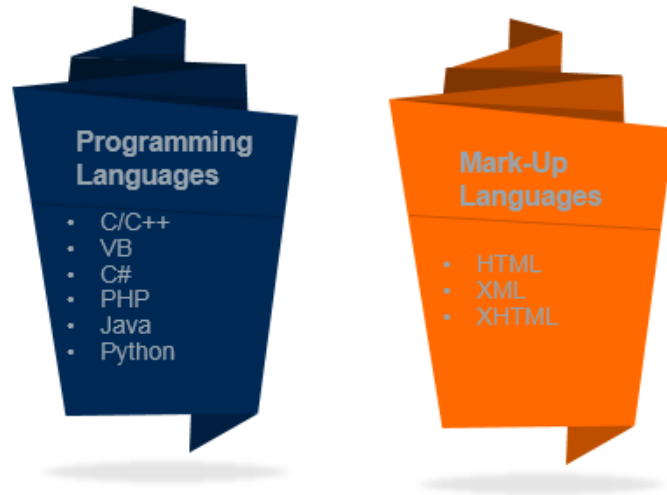


The .NET Framework is designed to carry out the following specific objectives:

- It provides a logical **object-oriented programming** environment in the basic programming of RPA, whether the programming object code is stored or executed locally or else the Internet-distributed, or executed remotely.
- It **provides a code-execution process** that lessens software deployment and versioning oppositions.
- In the Basic RPA programming, it provides a code-execution environment, that encourages the sustained execution of code, including an unknown or semi-trusted third party.
- It excludes the execution problems of scripted or interpreted code environments.
- In this, it makes the RPA developer experience compatible across the multiple types of apps whether it is based on any operating system.

Popular Languages

In computer programming, there are two categories of languages:



Java :

Java is a superior programming language that is developed by [Sun Microsystem](#). It is known as an object-oriented language, which is now owned by Oracle. It is used for databases, developing Android apps, and as a “backend” programming language for the web, desktop applications and more. It's immensely popular and is considered one of the most stable and reliable ways to build large systems.

VB (Visual Basic):

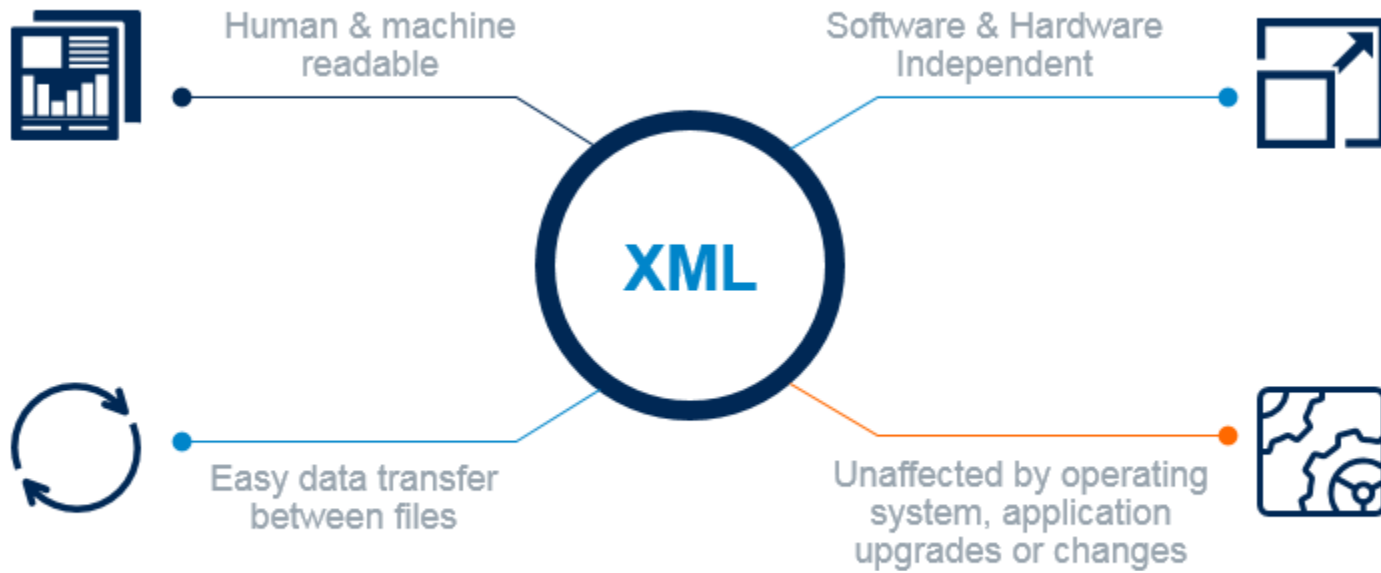
Visual Basic is a programming language of third generation which [uses graphic user interface or GUI](#) to modify and choose preselected codes written in the programming language of Basic.

C#:

The right pronunciation of this is C Sharp which was developed by Microsoft. It develops various types of enterprise applications and software for corporate clients. It is also known as [an object-oriented programming language that is similar to Java](#).

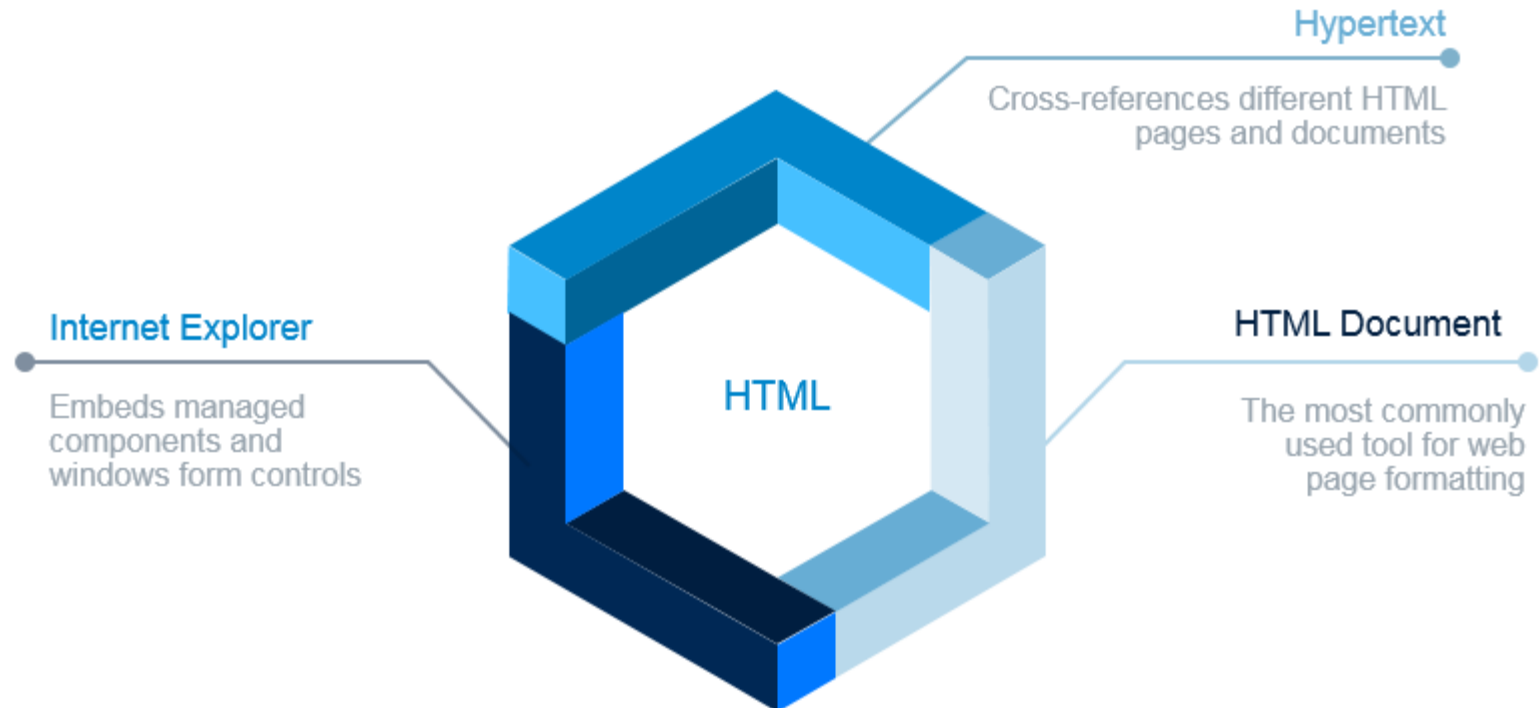
Python :

Python is the HLPL (high-level programming language). It is one of the [world's fastest-growing scripting languages](#). It's an easy language to start a web project with, where you can often use for higher-level programming like machine learning and data analysis. Along with the programming languages we also have mark up language such as HTML, XML, and XHTML.



XML or **Extensible Markup Language** is a meta language that allows users to specify their own customized markup languages by using custom tags.

HTML is a **Mark-up Language** which is used to “mark-up” a text document with tags that tell a web browser how to structure and display it.



What is Robotic Process Automation?

Nowadays, there is almost no aspect of our lives that is unaffected by automation. Some examples include:

- Washing machines,
 - Microwave ovens,
 - Autopilot mode for automobiles and airplanes,
 - Nestle using Robots to sell coffee pods in stores in Japan,
 - Walmart testing drones to deliver products in the US,
 - Bank checks being sorted using Optical Character Recognition (OCR), and ATMs
-
- The term **automation** is derived from the Greek words **autos** meaning **self**, and **motos**, meaning **moving**
 - Automation, in simple words, is **technology that deals with the application of machines and computers** to the production of goods and services. This helps in getting **work done with little or no human assistance**.
 - In the digital world, **automation and software development** are two different terms. Very often, however, one is confused with the other. **If some portion of a workflow can be programmed to be done without human intervention, it can be called automation.** For example, in order to pass any invoice in a payment system,
 - Developing an inventory management software system is called **software development**, while programming a step so that no more human intervention is required is called **automation**.

What should be automated?

There are a few aspects that have to be taken into consideration for choosing automation candidates. The following processes should be automated:

- **Repetitive steps**
- **Time-consuming steps**
- **High-risk tasks**
- **Tasks with a low-quality yield**
- **Tasks involving multiple people and multiple steps**
- **And everything else!**

What can be automated?

In order to automate something, it needs to have the following characteristics:

- **Well defined and rule-based steps**
- **Logical**
- **An input to the task can be diverted to the software system**
- **Input can be deciphered by software systems with available techniques**
- **The output system is accessible**
- **Benefits are more than the cost**

- **Robot in Robotic process** automation means **software programs** that **mimic human actions**.
- In simple words, RPA involves the use of **software that mimics human actions** while interacting with applications in a computer and accomplishing rule-based tasks.
 - This often requires reading from and typing, or clicking on existing applications that are used to perform the given tasks.
- In addition, these **software Robots also perform complex calculations and decision making** on the basis of the data and predefined rules
- Today, RPA has matured beyond doing **mundane repetitive tasks**, and is seen as a transformational technology that can bring tremendous value to the organization adopting it. The ability to create full audit trails is significant for **improving the quality of work being done and eliminating human error**

Benefits of RPA

Business process outsourcing (BPO): With RPA and its benefits of reduced costs, the BPO sector can now depend less on outsourced labor.

Insurance: The complexity and number of tasks that must be managed in the insurance sector, from managing policies, to filing and processing claims across multiple platforms, provides an ideal environment for the use of RPA technology.

Financial sector: From day-to-day activities and handling an enormous amount of data, to performing complex workflows, RPA has been helping to transform this sector into an efficient and reliable one.

Utility companies: These companies (such as gas, electricity, and water) deal with a lot of monetary transactions and can leverage RPA to automate tasks such as meter reading, billing, and processing customer payments.

Healthcare: Data entry, patient scheduling, and more importantly billing and claims processing, are important areas where RPA can be used. RPA will help in optimizing patient appointments, sending them automatic reminders of their appointments and eliminating human error in patient records. This leaves workers to focus more on the needs of the patients, and also leads to improved patient experience.

Higher quality services, greater accuracy: With reduced human error and greater compliance, the quality of work is much better. , the detection of errors is much simpler in RPA. This is because every step in the automation process is recorded, making it faster to pinpoint errors with ease.

Improved analytics: Since these software Robots can log each action taken with the appropriate tag and metadata, it is very easy to get business insights and other analytical data.

Reduced costs: Nowadays, it is commonplace to hear that one Robot is equivalent to three human full-time executives (FTE). This is based on the simple fact that one FTE works for eight hours a day, while a Robot can work for 24 hours without a break. Increased availability and productivity means the cost of operations is reduced tremendously.

Increased speed: Robots are very fast and sometimes the speed of execution has to be reduced to match the speed and latency of the application on which these Robots work. Increased speed can result in better response times and an increase in the volume of the tasks being performed

Scalability: RPA is highly scalable, up as well as down. Whether one requires an increase or reduction in the virtual workforce, Robots can be quickly deployed at zero or minimum costs while maintaining consistency in the quality of work.

Better management: RPA allows for managing, deploying, and monitoring Robots through a centralized platform. This also lessens the need for governance.

The UiPath platform is available in two variations:

1. Enterprise Edition:

- This edition is suitable for large companies starting their RPA projects and looking to scale their Robot deployments in the future. It is integrated with UiPath Orchestrator (we will discuss UiPath Orchestrator later).
- This version can be updated by visiting the UiPath website and by downloading the newest version of the UiPath platform installer. Running the installer automatically replaces all the old files without modifying any of your settings.

2. Community Edition:

- This is suitable for individual developers and small organizations with fewer employees. The Community Edition is always up-to-date, and it automatically updates itself as soon as a new version is available.

UiPath Studio

- UiPath Studio is the development environment of UiPath.
- It is the primary tool to develop UiPath Robots. It can be used to configure steps of a task or launch a full recorder to record a sequence of steps. The recording facility in the Studio is a game-changing feature for RPA tools.
- By using the drag-drop facility from the toolbox, you may write a whole sequence of workflows to perform a set of tasks by Robots. These steps look like a data flow diagram and are very easy to understand. It is one of the simplest visual flow diagramming tools
- The designer gives you full control of the execution order and actions taken, also known as activities. An activity or action includes clicking a button, writing and reading a file, and so on.

The main types of project supported by UiPath Studio are as follows:

Sequence: This is suitable for simple actions or tasks.

- It enables you to go from one activity to another, without interfering with your project.
- It consists of various activities. Creating sequences is also useful for debugging purposes.
- One activity from a particular sequence can easily be tracked.
- The Basic type of project can be started using the Blank option in the start tab and then adding the sequence in the diagram from the toolbox

Flowchart: This is suitable for dealing with more complex projects.

- It enables you to integrate decisions and connect activities. To start this kind of project, choose the Flowchart - Simple Process option from the new project menu.

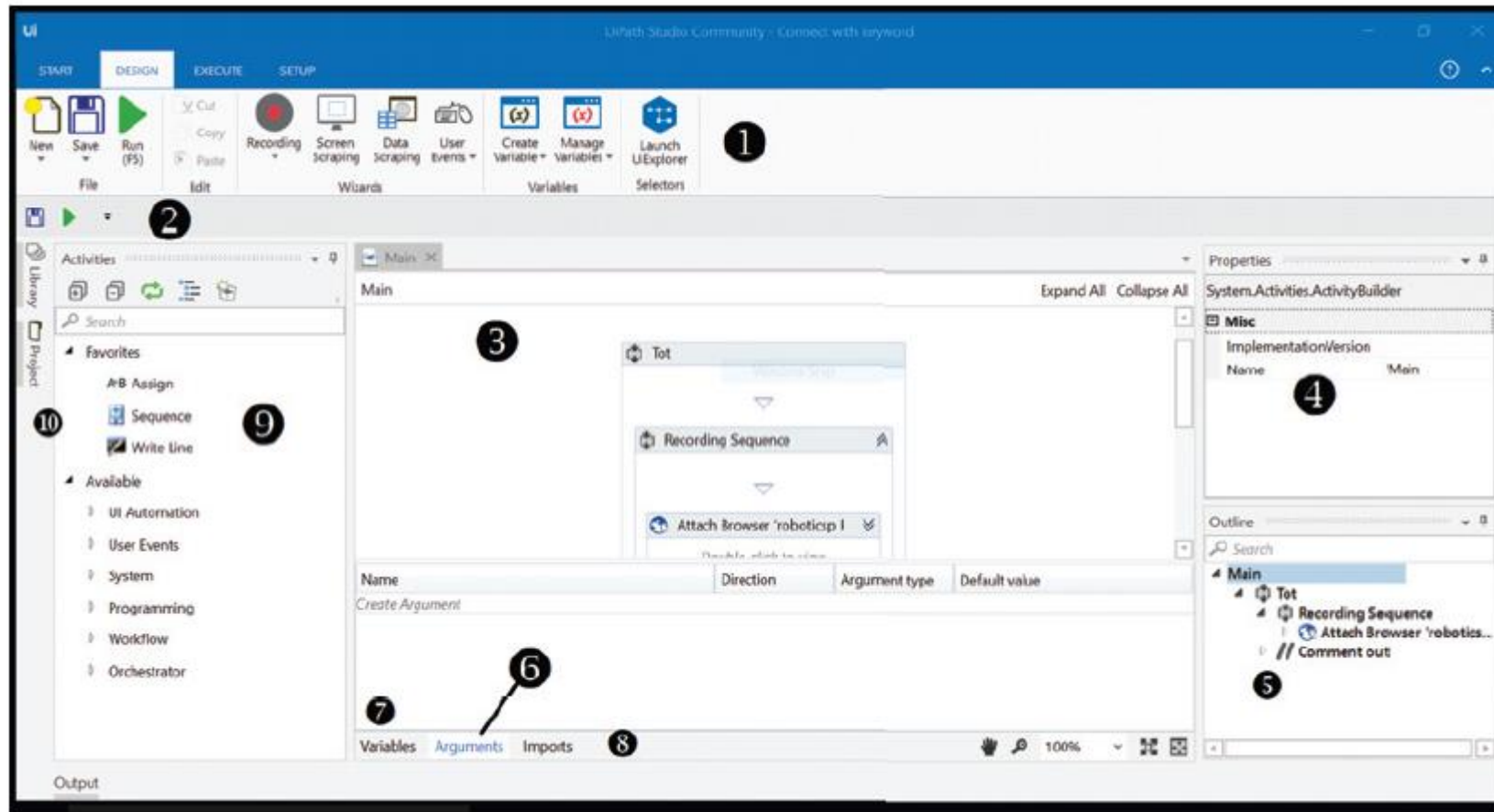
State machine: This is suitable for very large projects that use a finite number of states in their execution, triggered by a condition.

- To start this kind of project, choose the Process - Transaction Business Process option from the new project menu:

Assistant: This is suitable for developing attended or Front Office Robots:

- sometimes these Robots are called assistants. To start this kind of project, choose the Assistant - Agent Process Improvement option from the new project menu.

The user interface



1. The Ribbon
2. Quick Access Toolbar
3. Designer panel
4. Properties panel
5. Outline panel
6. Arguments panel
7. Variable panel
8. Import panel
9. Activity panel
10. Library panel
11. Project panel
12. Output panel

Introduction to Automation

Automation is the technology by which a process or procedure is performed with minimal human assistance.

- Operating equipment such as machinery, processes in factories, boilers.
- Switching on telephone networks, steering and stabilization of ships, aircraft

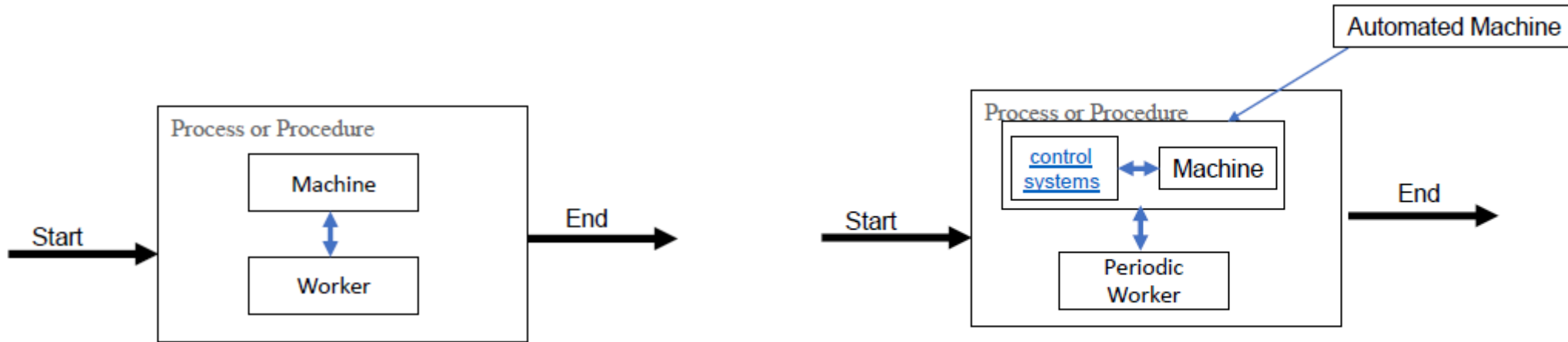
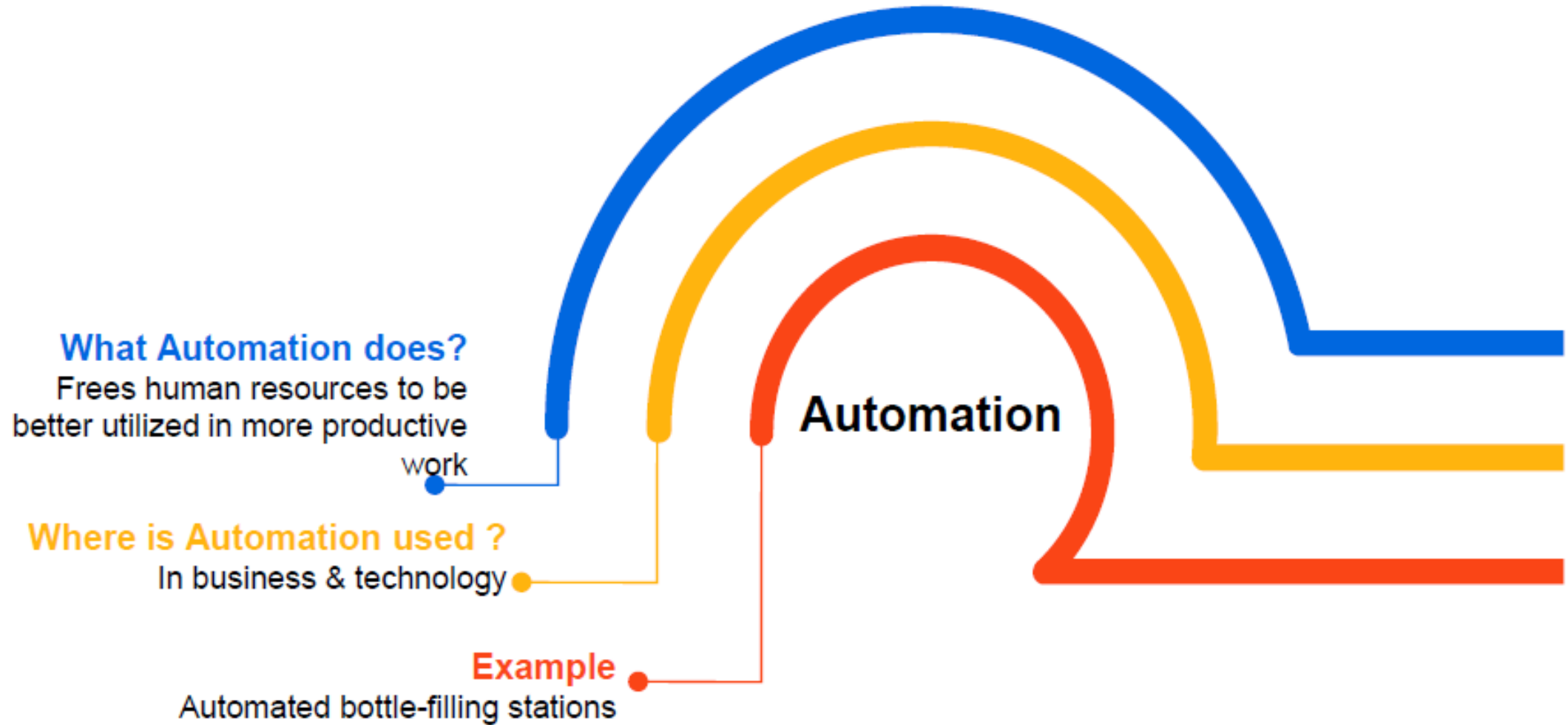


Fig: 1.a General execution of process

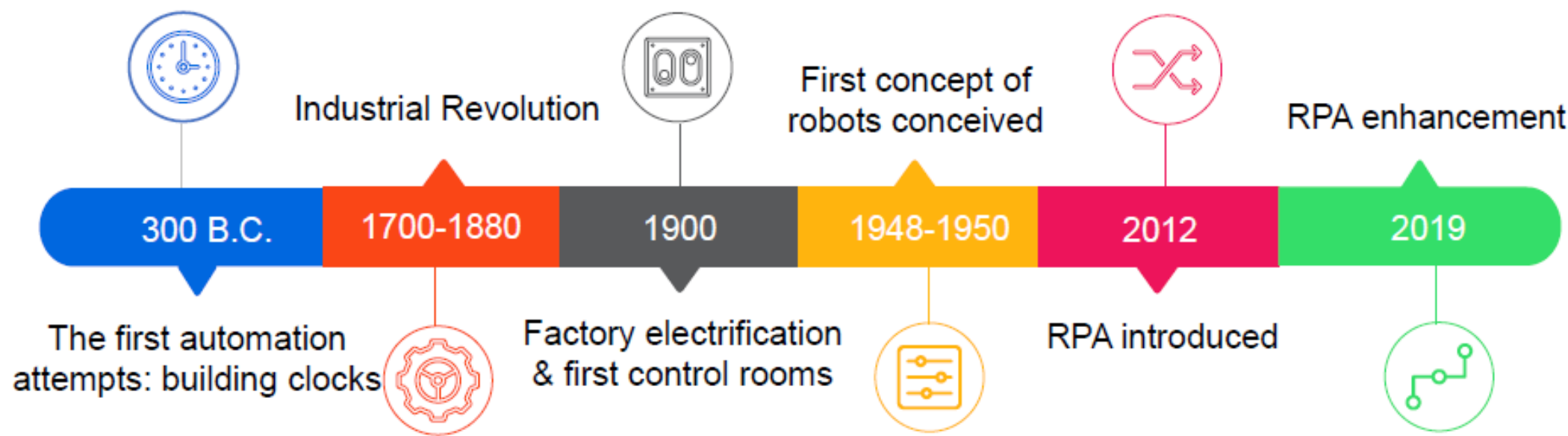
Fig: 1.b Execution of process using Automation

Introduction to Automation

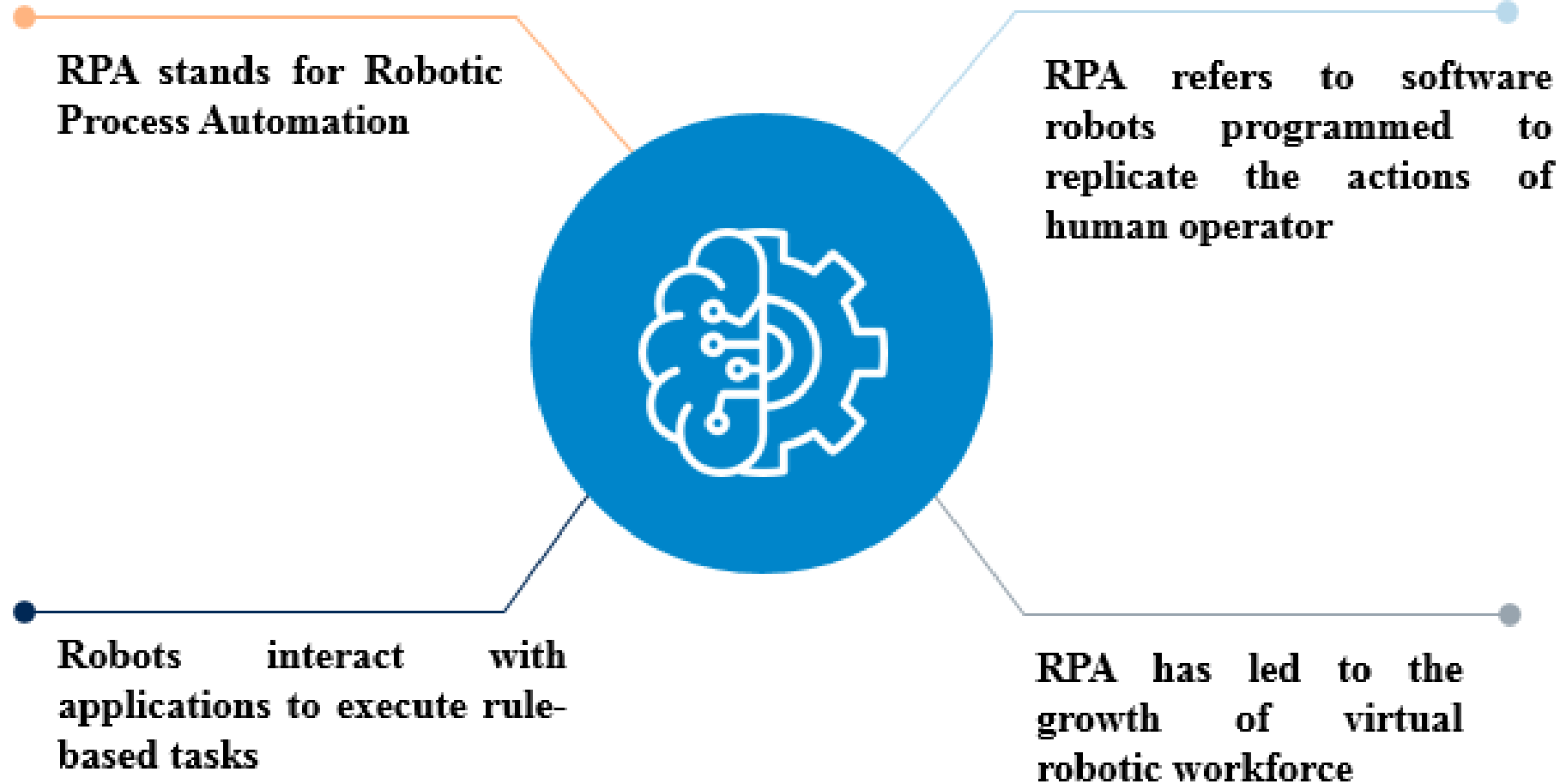


Overview of History of Automation

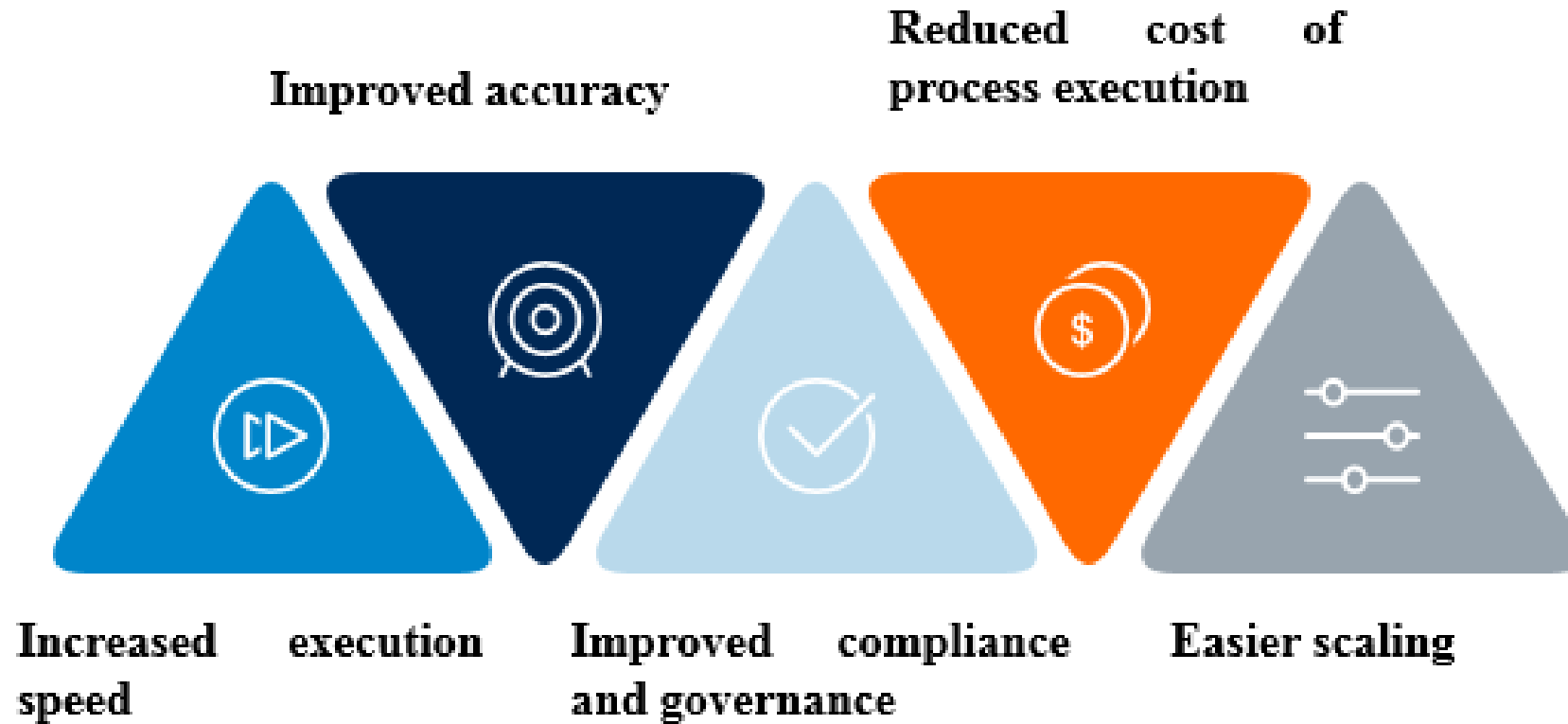
The history of automation began more than 2300 years ago.



AUTOMATION AND RPA: Introduction to RPA



AUTOMATION AND RPA: Advantages of RPA



AUTOMATION AND RPA: Advantages of RPA

- **Increased execution speed:**
 - RPA robots are much quicker and efficient than a human operator.
- **Improved accuracy:**
 - RPA leads to improved accuracy as the designed robot works on the given instruction.
- **Improved compliance and governance:**
 - RPA solutions have already been adopted to ensure regulatory compliance, especially in the banking sector. Since the Robot Login details are secure and unique, the activity carried out is well controlled and supervised leading to improved regulatory compliance. This creates transparency and allows the user to recognize any issue or defect easily.
- **Reduced cost of process execution:**
 - The work capacity of robots is superior to that of human workers. When an RPA solution is implemented, the task execution rate is considerably increased, and the corresponding costs are decreased. A robot can work 24*7, there is no time constraint. This increases the productivity time and improves the output.
- **Easier scaling:**
 - The amount of work involved in a process can vary, as unexpected changes are likely to occur in most business environments. If an RPA solution is used, companies can easily adapt by scaling the solution up or down, depending on the requirements, regardless of how volatile they might turn out to be.

Automation vs RPA

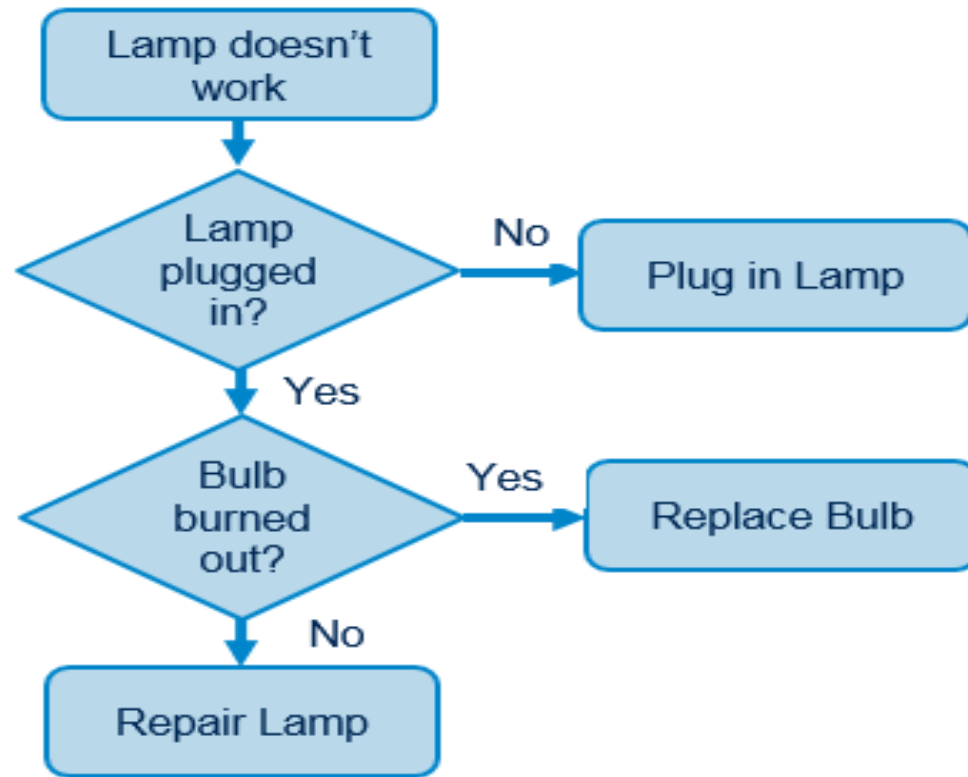
Automation	Robotics Process Automation
The method by which we improve the existing process and improve the efficiency is called automation	The advanced form of automation involving latest technology like screen scraping , workflow and Artificial intelligence
This was first time used in heavy industry by D.S. Harder an engineer working for Ford motors .	The term was coined by Blue Prism in 2012
Example: Heavy Industries like: Automobile, Manufacturing etc.	Example: Finance, Healthcare, Insurance etc.






Programming Constructs in RPA

- A process is defined as **a series of steps, activities, and decisions** involved in the way work is accomplished.
 - Very simple processes can be replicated as such, without other interventions. However, in case of complex business processes, an RPA developer needs to configure the workflow in order to make business decisions or do complex operations.
 - RPA involves the use of **robotic control flow to capture the logic and decisions of a business process**. RPA tools offer plenty of activities and technologies to match the needs and complexity of real-life processes.
 - There are typically two ways to represent a process:
 - As **a sequence**, where actions come one after the other
 - As **a flowchart**, where there are multiple decision points and logical branches
 - The process chosen for automation is split into simple actions and mapped in the RPA tool.
 - The RPA developer analyzes and configures the mapped process by introducing decision points, variables, pre-defined operations, and other types of elements available in the RPA tool.
 - Once the logic is replicated in the workflow, the process is ready for automation.

Flowchart

Flowchart depicts the flow of a program and is also known as process flow diagram.



Symbol	Name
	Start/end
	Arrows
	Input/output
	Process
	Decision

Programming constructs are the backbone of any programming language. Some important programming constructs are:



- **Sequence:** The term sequence denotes the first step or the first block of programming. It indicates the next process or step that needs to be taken.
- **Selection:** Once the programmer has constructed the sequence, it is important to select a course of action on the basis of the given conditions. Hence, we can say that selection allow a programmer to choose among the various alternatives that best suit the requirement .
- **Repetition:** A repetition construct causes a group of one or more program statements to be invoked or applied repeatedly until some end condition is met.
- **Control Statements:** These are common ways of controlling the flow of logic, operations, functions in a program/algorithm. These act like the ‘plumbing’ of a program or algorithm. Examples: ‘if’ statements, ‘while’ or ‘for each’ loops
- **Data Types:** Data types are used to specify any kind of expected class of information. Common data types are Integer (0, 1, 2), Float (0.5, 1.234, 20.3) and Character (‘a’, ‘b’, ‘c’). String are one or more characters (“Tom”), Boolean (holding either a ‘True’ or ‘False’ value). Each language can define its own data types.

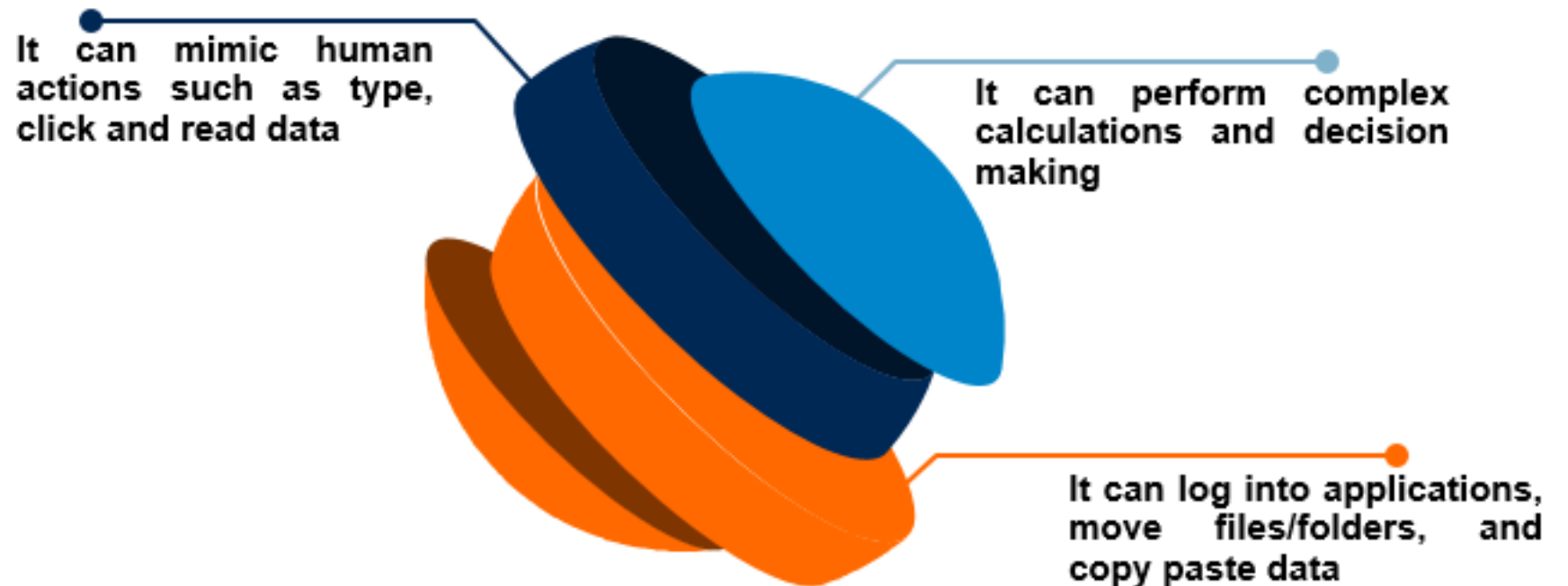
RPA Programming Constructs

- **Scope:** A scope is a specific context that is relevant to the program at any particular point in time. **The scope has to be very clear and defined for the success of the project.**
- **Validation:** At any step in a process or automation, there might need for validation. It is defined as the act of verifying the qualities of a process to ensure that they are correct. **Validating data in a process is often a critical requirement before execution.** Common examples are making sure that:
- **Input /Output:** For each piece of automation or algorithm, there might be an expected Input and/or Output. Any information or data that is sent to a computer for processing is considered input. **Input is the data at the entry point of the automation.** Any information that has been processed by and sent out from a computer or other electronic device is considered output. **Output is the data being returned at the end of the automation.**
- **Risk/Error Handling:** Every process should be evaluated for risk. This generally includes looking at every step of the process that can fail, or result in a failure later on in the process. This also involves quantifying how a possible failure could harm the overall system or business. By identifying all possible risks, error handling can be implemented to mitigate or completely reduce that risk. **Error handling makes programming effective and more reliable**, so that the activities executed by the program are useful and have zero impact on the productivity. No machine can be 100% efficient (ideal case) but we should try to minimize the error .
- **Optical Character Recognition (OCR):** OCR refers to the software that analyzes images for alphanumeric characters. It processes a digital image by locating and **identifying characters such as letters, numbers, and symbols.**

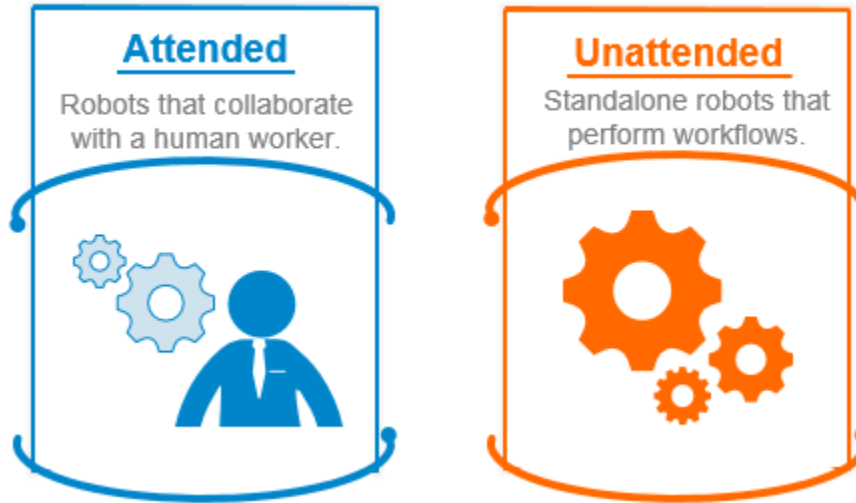
RPA Robot

A robot is a software that can execute workflows containing multiple steps.

- The software robots are designed for improving efficiency and saving time.
- They are versatile and work 24*7.
- They are efficient and are cost effective as they save resources .
- The software robot can perform task such as loop, control, pathfinding, data filtering, and sharing data.



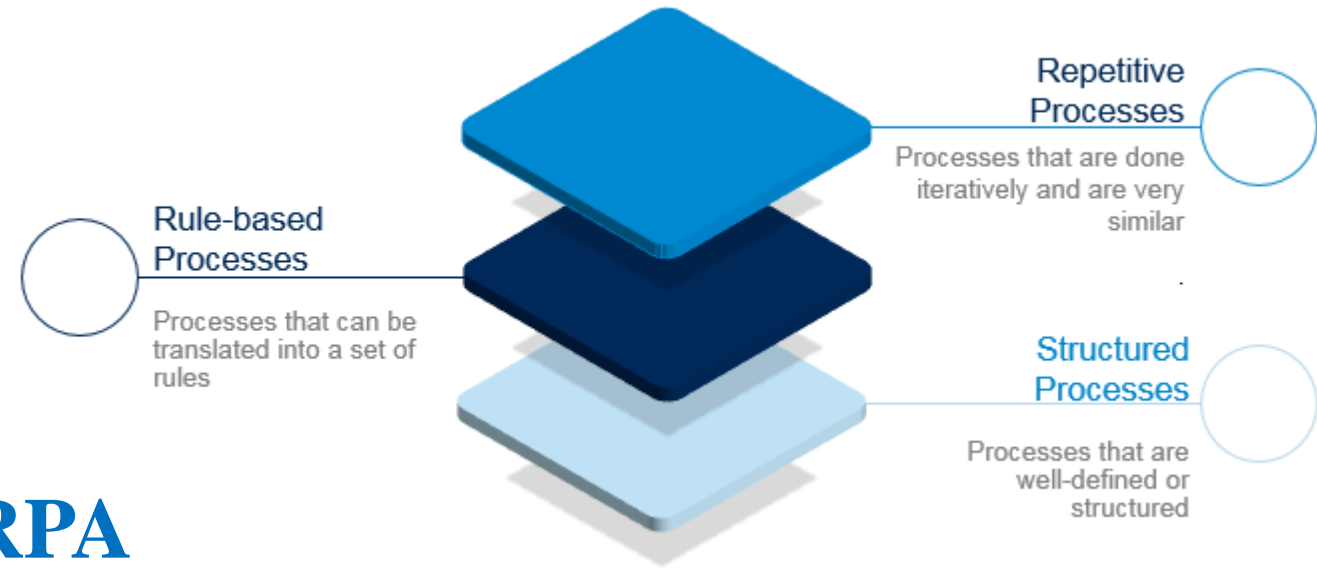
Types of RPA Robots



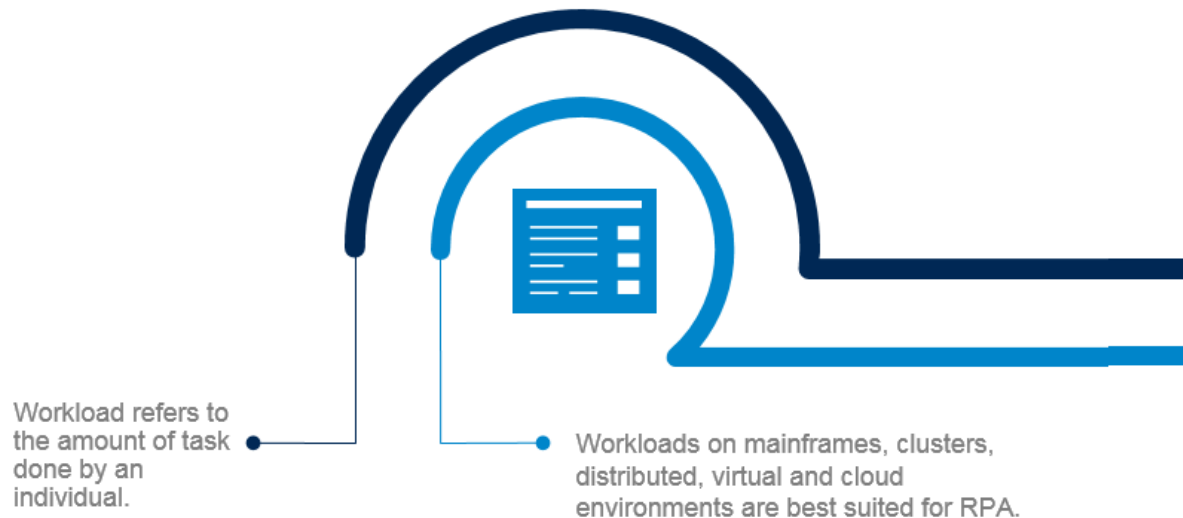
- **Attended robots** collaborate **with human workers** on business activities, speeding up repetitive front-office tasks.
- They reside on the workstation of the human worker and are perfect collaborators in service desk, helpdesk, and call center activities.
- They work in the background and ensure high productivity and low handling times, while the human workers can continue to carry out their tasks unhindered.
- They need manual intervention and hence they are not fully automated. Manual intervention is required where human activity or intelligence is required for the further execution or completing the task.
- **Unattended robots** can operate **without human touch** on any variety of back-office activities.
- They can run in both physical and virtual environments. They can also be scheduled to start and stop at any time as per the business requirements.
- The unattended robots are maintained and guided remotely by server. These robots are designed to work end to end without any interventions.

Processes Best Suited for RPA

Processes that are simple, structured and can be easily mimicked by a machine are best suited for RPA.



Workloads Best Suited for RPA



Workloads involving various business processes and transactions are a good candidate for RPA.

Benefits of RPA

RPA has led to an improvement in the quality of work and made processes more scalable, resulting in:



Implementation of RPA

RPA has been implemented in various business areas to perform repetitive and time-consuming tasks.

HR Services



Process Examples:

- Recruitment
- Payroll
- Personnel administration

Finance and Accounting



Process Examples:

- Procurement to pay
- Order to cash
- Vendor management

IT Services



Process Examples:

- Password reset
- Account unlock
- Chatbot integration

Supply Chain



Process Examples:

- Inventory Management
- Invoice/Contract Management
- Work Order Management

- **HR Services** involve a variety of repetitive processes, which are highly-standardized through different template forms. These processes take place regularly and with high frequency. Some examples of repetitive processes include recruitment, data entry, payroll, personnel administration. We can infer that repetitive, highly-standardized, regular, and frequent processes are the first ones to be considered when deciding what should be automated.
- **Finance and Accounting** is an area where a significant amount of processes have already been automated by many companies. Processes such as Procurement to Pay, Order to Cash, Vendor Management, and many others have proven ideal candidates for automation, bringing important benefits such as cost savings, error reduction, and faster processing to the business.
- **IT Services** is another department where RPA can be leveraged. Typical IT support scenarios, such as password reset and account unlock, can easily be automated. Automating these simple tasks allows the IT department members to focus on more important and sophisticated projects.
- **Supply Chain processes** are typically repetitive and time-consuming. Activities such as Inventory Management, Invoice and Contract Management or Work Order Management make good candidates for RPA.