IT Resolution Agent

1. Overview

This project demonstrates an **Agentic AI solution built using Automation Anywhere (AA360)** as part of the **Agentic Bounty Challenge**.

The agent autonomously handles **ServiceNow incident tickets** by analysing ticket context, urgency, and description, then deciding whether to:

- Route the ticket to a **Human IT team (Human-in-the-Loop)**, or

- Provide an **AI-driven resolution directly to the user**.

The solution showcases **agentic behaviour** such as decision-making, context awareness, tool usage, and escalation handling.

---

2. Business Problem

In enterprise IT environments:

- High volumes of ServiceNow tickets slow down IT Team work.

- Critical incidents (Urgency 1) require immediate human attention.

- Medium/low priority tickets often repeat common issues and can be auto resolved.

This leads to:

- Increased resolution time

- Overloaded IT teamwork

- Poor user experience

---

3. Solution Summary

This agent acts as an **AI-powered incident triage and resolution assistant**.

What the agent does:

- The agent will first fetch the open ticket details using **API**

- If there are more than one ticket the agent will receive those in a list as it will be processed one by one.

- Analyses ticket **ID, description, and urgency.**

- Decides the **next best action** based on urgency.

- Routes or resolves tickets autonomously.

4. End-to-End Process Flow

Step 1: Ticket Creation

- A user raises an **incident ticket in ServiceNow**

- Ticket details include:

  - Ticket ID

  - Description

  - Urgency (1 / 2 / 3)

Step 2: Getting Ticket Details

- The agent will first fetch the open ticket details using **API**

- Ticket ID is passed as the primary input.

Step 3: Ticket Analysis (Agentic Reasoning)

The AI agent:

- Reads the ticket description

- Evaluates urgency level

- Understands the issue context using a **GenAI prompt**

Step 4: Decision Logic (Core Agentic Behavior)

🔴 **Urgency = 1 (Critical)**

- Ticket is **assigned to the IT team** immediately

- A **Human-in-the-Loop (HITL) form** is triggered

- IT team works on the issue

- Resolution is submitted via approval/response

🟡 **Urgency = 2 or** 🟢 **Urgency = 3**

- AI agent generates a **resolution or instructions**

- Agent guides the user with step-by-step actions

- No human intervention required

Step 5: Resolution & Closure

- For Urgency 1:

    o Agent waits for IT team confirmation

    o After approval, updates ServiceNow

    o Ticket is closed

- For Urgency 2 & 3:

    o Agent provides resolution

    o Confirms user acknowledgment

    o Ticket is closed automatically

---

5. Tools & Integrations Used

Tool Selection Breakdown

Tool	Role in Solution
ServiceNow API	Fetch ticket details and update status
GenAI / LLM Tool	Understand description and decide next action
Decision Logic	Route based on urgency
Human-in-the-Loop	IT approval for critical tickets
Notification / Update	Inform user and close ticket

---

6. Why This Is an Agentic Solution

This is **a goal-based bot**. The agent:

- Autonomously analyses context

- Makes decisions dynamically

- Selects tools based on urgency

- Involves humans only when required

- Continues execution after human input

This demonstrates true **agentic behaviour**.

---

7. Setup & Dependencies

Prerequisites

- Automation Anywhere 360 Control Room

- ServiceNow access (API enabled)

- GenAI tool configuration in Control Room

Configuration Notes

- ServiceNow credentials stored securely

- Ticket ID passed as runtime input

- Prompt templates configured for ticket analysis

---

8. How to Use the Agent

1. User raises a ticket in ServiceNow

2. Agent is triggered automatically

3. Agent analyses urgency and description

4. Ticket is either:

   o Assigned to IT team (Urgency 1), or

   o Resolved by AI (Urgency 2 & 3)

5. Ticket is closed after resolution

---

9. Demo Video

- A public demo video is recorded and uploaded to **YouTube**

- The video demonstrates:

      o   Problem statement

      o   Control Room configuration

      o   Agentic decision-making

      o   Live ticket resolution

(*Attach the Video link added in You Tube)

---

10. Value Delivered

- Faster incident resolution

- Reduced IT workload

- Improved user experience

- Scalable and reusable agentic design

---

11. Conclusion

This project showcases how **Agentic AI with Automation Anywhere** can intelligently triage, resolve, and escalate ServiceNow incidents by combining AI reasoning, automation, and human collaboration.