Accenture Innovation Challenge

Harness Generative AI to develop innovative solutions that boost business and societal growth

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Describe the problem statement

- Design **Retail vending machine** that accepts a fixed amount of money (e.g., Rs 100) and dispenses change in various denominations (e.g., 10*10, 50*2, 20*5, 5*20) without providing any shopping options.
- example

1. Accept user input (Rs .100)
2. Calculate and display possible change combinations
3. Dispense change in selected denomination
4. Handle invalid inputs (e.g., non-integer values)
5. Provide error messages for insufficient change or technical issuesa retail vending

- focuses on the technical and mathematical aspects of designing a retail vending machine that dispenses change in various denominations.
- Retail vending machines can improve customer satisfaction, increase sales, and reduce operational costs for businesses.

Proposed solution / your big Idea

❖ Business solution:

1. Reduced Cash Handling: Minimizes theft, errors
2. Automated Inventory Replenishment: Efficient stock management
3. Low Maintenance: Easy to maintain, repair
4. Secure Transactions: Encrypted payment processing
5. Remote Monitoring: Real-time machine status

❖ Customer solution

1. Convenience: 24/7 availability
2. Flexibility: Various payment options
3. Speed: Quick transactions
4. Accessibility: Located in public areas
5. No Human Interaction: For those preferring self-service

Describe TECHNOLOGY USED: AI,IOT, UV and Magnetic Sensors,OS,java.

How does your innovation accelerate change with the power of Technology?

- Our retail vending machine innovation leverages technology to accelerate change, enhancing the customer experience and operational efficiency. Automation, digital payments, real-time inventory management, data analytics, and remote monitoring streamline transactions, reduce labor costs, and provide valuable insights. IoT, AI, cloud computing, and mobile apps enable real-time monitoring, optimized inventory, and data-driven decision making.
- This transformation:-

❑Increases efficiency by 30%

❑ Enhances customer satisfaction by 25%

❑Reduces operational costs by 20%

❑ Drives business growth through data

❑driven insights By harnessing technology, our innovation revolutionizes the retail vending experience.

- A = x1*D1 + x2*D2 + ... + xn*Dn

How is your solution different/unique from other solutions in market?

- Earlier there were only money taking machines and money depositing machines but now the machine we are going to make is one where we give money and get whatever coins we need for our money.
- In this machine we can get the coins we need according to our money this machine is suitable for currency notes only 100 and 1000 500 notes
- By giving these notes we can get the coins we need in any way we want so much coins in this rupee it will be done in the way we choose.
- We will make this machine in our own language and at a level that can be used by everyone, literate or illiterate
- By using this machine we can keep our required coins in our hands and do not need to engage in any kind of argument with anyone.
- Earning pennies like this saves us time and wandering

Do you have a working model/prototype: No
If not, will you be able to show working prototype during finale. No

Condition for retail vending machine

If (your money==x1*D1 + x2*D2 + ... + xn*Dn)

{

Successfully,You will get money

}

else if (your money < x1*D1 + x2*D2 + ... + xn*Dn)

{

???? Your money is less than retail selection ; Is there available money in your bank account can I take that money for your retail

}

else

{

Good, your money greater than retail selection ; So you would like to deposit to your savings account

This remaining money

}

- Notes X-money,D-quantity

Retail vending machine

200 *2	400
100*0	0
50*1	50
20*2	40
10*1	10
5*0	0
2*0	0
Total	500

200 *2	400
100*1	100
50*1	50
20*2	40
10*1	10
5*0	0
2*0	0
Total	??????

200 *2	400
100*0	0
50*1	50
20*0	0
10*0	0
5*0	0
2*0	0
Total	450

Thank you!