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```
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```
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     "class Product:\n",
          def init (self, name, price, stock):\n",
           self.name = name \n",
          self.price = price\n",
          self.stock = stock\n",
     "\n",
          def update stock(self, quantity):\n",
           self.stock += quantity\n",
     "\n",
          def str (self):\n",
          return f\"Product: {self.name}, Price: ${self.price:.2f},
Stock: {self.stock}\"\n",
     "\n",
     "\n",
     "def main():\n",
          products = \{\} \n'',
     "\n",
          while True:\n",
          print(\"\\nProduct Management System\")\n",
     **
          print(\"1. Add Product\")\n",
          print(\"2. Update Stock\")\n",
          print(\"3. View Product Details\")\n",
     **
          print(\"4. Exit\")\n",
          choice = input(\"Enter your choice: \")\n",
     "\n",
           if choice == \"1\":\n",
                name = input(\"Enter product name: \")\n",
                price = float(input(\"Enter product price: \"))\n",
                stock = int(input(\"Enter stock quantity: \"))\n",
                products[name] = Product(name, price, stock)\n",
                print(\"Product added successfully!\")\n",
     "\n",
```

```
elif choice == \"2\":\n",
     **
                name = input(\"Enter product name: \")\n",
     11
                if name in products: \n",
                      quantity = int(input(\"Enter quantity to
add/remove (negative to remove): \"))\n",
                     products[name].update stock(quantity)\n",
     **
                      print(\"Stock updated successfully!\")\n",
     **
                else:\n",
                      print(\"Product not found!\")\n",
     "\n",
           elif choice == \"3\":\n",
                name = input(\"Enter product name: \")\n",
                if name in products:\n",
                       print(products[name]) \n",
     11
                else:\n",
     **
                      print(\"Product not found!\")\n",
     "\n",
           elif choice == \"4\":\n",
                print(\"Exiting the system. Goodbye!\")\n",
                break\n",
           else:\n",
     11
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