

Q.) Implement GOMS (Goals, Operators, Methods and Selection rules) modeling technique to model user's behavior in given scenario. Goal: Select an item and add it to cart

GOMS Model - Select Item and Add to Cart

GOAL:

- SELECT AN ITEM AND ADD IT TO CART ON AN E-COMMERCE WEBSITE

METHOD 1 (DIRECT ADD FROM PRODUCT LIST):

1. M (MENTAL PREPARATION) = 1.35 SEC
2. P (POINT TO PRODUCT) = 1.10 SEC
3. B (CLICK PRODUCT) = 0.20 SEC
4. R (PAGE LOAD – SYSTEM RESPONSE) = 2.00 SEC
5. P (POINT TO “ADD TO CART” BUTTON) = 1.10 SEC
6. B (CLICK “ADD TO CART”) = 0.20 SEC

TOTAL EXECUTION TIME: 6.0 SEC

KEY HITS (K): 0

POINTING (P): 2

BUTTON CLICKS (B): 2

HOMING (H): 0

MENTAL (M): 1

SYSTEM RESPONSE (R): 1

METHOD 2 (SEARCH ITEM → ADD TO CART):

1. M (MENTAL PREPARATION) = 1.35 SEC
2. P (POINT TO SEARCH BAR) = 1.10 SEC
3. K × 5 (TYPE ITEM NAME) = 1.40 SEC
4. K (PRESS ENTER) = 0.28 SEC
5. R (SEARCH RESULTS LOAD) = 2.00 SEC

6. P (POINT TO PRODUCT) = 1.10 SEC

7. B (CLICK PRODUCT) = 0.20 SEC

8. R (PRODUCT PAGE LOAD) = 2.00 SEC

9. P (POINT TO "ADD TO CART") = 1.10 SEC

10. B (CLICK "ADD TO CART") = 0.20 SEC

TOTAL EXECUTION TIME: 10.73 SEC

KEY HITS (K): 6

POINTING (P): 3

BUTTON CLICKS (B): 2

HOMING (H): 0

MENTAL (M): 1

SYSTEM RESPONSE (R): 2

SELECTION RULE:

- If the product is already visible on screen, use METHOD 1 (direct click) — it is faster.
- If the user needs to search for the product, use METHOD 2 (search → add), but it takes longer due to typing and page loading.

Q.)Implement GOMS (Goals, Operators, Methods and Selection rules) modeling technique to model user's behavior in given scenario Goal-Delete the Mail.

GOAL:

DELETE A MAIL in an email application (like Gmail, Outlook, etc.)

METHOD 1: Direct Delete from Inbox List

Steps:

1. **M** (Mental preparation) = 1.35 sec
2. **P** (Point to the mail to delete) = 1.10 sec
3. **B** (Click on mail checkbox or select mail) = 0.20 sec
4. **P** (Point to “Delete” icon/button on toolbar) = 1.10 sec
5. **B** (Click “Delete” button) = 0.20 sec
6. **R** (System response – Mail deleted/confirmation) = 1.50 sec

TOTAL EXECUTION TIME: 5.45 sec

Key counts:

- **Key hits (K):** 0
- **Pointing (P):** 2
- **Button clicks (B):** 2
- **Homing (H):** 0
- **Mental (M):** 1
- **System Response (R):** 1

METHOD 2: Open Mail → Delete from Inside Mail View

Steps:

1. **M** (Mental preparation) = 1.35 sec
2. **P** (Point to the mail) = 1.10 sec
3. **B** (Click to open mail) = 0.20 sec
4. **R** (System response – Mail loads) = 2.00 sec
5. **P** (Point to “Delete” icon inside mail) = 1.10 sec
6. **B** (Click “Delete”) = 0.20 sec
7. **R** (System response – Mail deleted/confirmation) = 1.50 sec

TOTAL EXECUTION TIME: 7.45 sec

Key counts:

- **Key hits (K): 0**
- **Pointing (P): 2**
- **Button clicks (B): 2**
- **Homing (H): 0**
- **Mental (M): 1**
- **System Response (R): 2**

SELECTION RULE:

- **If the mail is already visible in the inbox list → Use METHOD 1 (Direct Delete) – it’s faster.**
- **If the user needs to read or confirm the content before deleting → Use METHOD 2 (Open then Delete) – it’s slower, but ensures verification.**

Q.) Implement GOMS (Goals, Operators, Methods and Selection rules) modeling technique to Model user's behavior in given scenario. GOAL: CLOSED WINDOW.

GOAL:

CLOSE A WINDOW on a computer screen (e.g., a browser window or application window)

METHOD 1: Using Mouse (Click on “X” Button)

Steps:

1. **M** (Mental preparation – decide to close window) = 1.35 sec
2. **P** (Point to the “X” or close button at top-right corner) = 1.10 sec
3. **B** (Click “X” button) = 0.20 sec
4. **R** (System response – window closes) = 1.50 sec

TOTAL EXECUTION TIME: 4.15 sec

Key counts:

- **Key hits (K):** 0
- **Pointing (P):** 1
- **Button clicks (B):** 1
- **Homing (H):** 0
- **Mental (M):** 1
- **System Response (R):** 1

METHOD 2: Using Keyboard Shortcut (Alt + F4)

Steps:

1. **M** (Mental preparation – recall shortcut) = 1.35 sec
2. **H** (Move hand from mouse to keyboard) = 0.40 sec

3. **K × 2** (Press and hold Alt + F4 keys) = 0.56 sec
4. **R** (System response – window closes) = 1.50 sec

TOTAL EXECUTION TIME: 3.81 sec

Key counts:

- **Key hits (K): 2**
- **Pointing (P): 0**
- **Button clicks (B): 0**
- **Homing (H): 1**
- **Mental (M): 1**
- **System Response (R): 1**

SELECTION RULE:

- **If hands are already on the mouse → Use METHOD 1 (Mouse click on “X”)**
– easier and intuitive.
- **If hands are already on the keyboard → Use METHOD 2 (Alt + F4 shortcut)**
– faster and more efficient.