## **Chanakya university**

**NAME:** CHANDAN R

REG NUMBER: 24UG00436

## **FULL CODE:**

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
typedef struct Tab {
  int pageID;
  char url[100];
  struct Tab *prev, *next;
} Tab;
Tab *head = NULL, *current = NULL;
int pageCounter = 1;
// Function to create a new tab
Tab* createTab(char url[]) {
  Tab *newTab = (Tab*)malloc(sizeof(Tab));
  newTab->pageID = pageCounter++;
  strcpy(newTab->url, url);
  newTab->prev = newTab->next = NULL;
  return newTab;
}
```

```
// Visit a new page
void visitNewPage() {
  char url[100];
  printf("Enter URL: ");
  scanf("%s", url);
  Tab *newTab = createTab(url);
  if (head == NULL) {
    head = newTab;
    current = newTab;
  } else {
    current->next = newTab;
    newTab->prev = current;
   current = newTab;
}
  printf("Visited: %s (PageID: %d)\n", current->url, current->pageID);
}
// Move forward
void goForward() {
  if (current != NULL && current->next != NULL) {
    current = current->next;
    printf("Moved Forward → %s (PageID: %d)\n", current->url, current->pageID);
 } else {
    printf("No next tab available!\n");
  }
}
// Move backward
void goBack() {
  if (current != NULL && current->prev != NULL) {
```

```
current = current->prev;
    printf("Moved Back ← %s (PageID: %d)\n", current->url, current->pageID);
  } else {
    printf("No previous tab available!\n");
 }
}
// Show current tab
void showCurrentTab() {
  if (current != NULL) {
    printf("Current Tab → %s (PageID: %d)\n", current->url, current->pageID);
 } else {
    printf("No tab open!\n");
 }
}
// Close current tab
void closeCurrentTab() {
  if (current == NULL) {
    printf("No tab to close!\n");
    return;
  }
  printf("Closing tab: %s (PageID: %d)\n", current->url, current->pageID);
  if (current->prev != NULL)
    current->prev->next = current->next;
  if (current->next != NULL)
    current->next->prev = current->prev;
  Tab *temp = NULL;
  if (current->next != NULL)
    temp = current->next;
```

```
else
   temp = current->prev;
  if (current == head)
    head = current->next;
  free(current);
  current = temp;
}
// Show all history
void showHistory() {
  Tab *temp = head;
 if (temp == NULL) {
    printf("No history available!\n");
    return;
  }
  printf("Browser History:\n");
  while (temp != NULL) {
    printf("PageID: %d, URL: %s\n", temp->pageID, temp->url);
   temp = temp->next;
 }
}
int main() {
  int choice;
  while (1) {
    printf("\n===== Browser Menu =====\n");
    printf("1. Visit a New Page\n");
    printf("2. Go Back\n");
    printf("3. Go Forward\n");
    printf("4. Show Current Tab\n");
```

```
printf("5. Close Current Tab\n");
 printf("6. Show History\n");
 printf("7. Exit\n");
 printf("Enter choice: ");
 scanf("%d", &choice);
 switch (choice) {
   case 1: visitNewPage(); break;
   case 2: goBack(); break;
   case 3: goForward(); break;
   case 4: showCurrentTab(); break;
   case 5: closeCurrentTab(); break;
   case 6: showHistory(); break;
   case 7: exit(0);
   default: printf("Invalid choice!\n");
 }
}
return 0;
```

}