```c
/* Define a structure called Time containing 3 integer members (hour, minute, second).
Develop a menu driven program to perform the following by writing separate function for eac
a) Read (T): To read time b) Display (T):To display time c) update(T):To Update time
d) Add (T1, T2) : Add two times.
Update function increments the time by one second and returns the new time (if the incremen
then the second member is set to zero and minute member is incremented by one. If the resul
the minute member is set to zero and the hour member is incremented by one.
Finally, when the hour becomes 24, Time should be reset to zero.
While adding two time variable, normalize the resultant time value as in the case of update
Note: Illustrate the use of pointer to pass time variable to different functions.*/

#include <stdio.h>

// Structure definition
struct Time {
int hour;
int minute;
int second;
};

// Function prototypes
void readTime(struct Time *t);
void displayTime(struct Time *t);
void updateTime(struct Time *t);
struct Time addTime(struct Time *t1, struct Time *t2);

int main() {
struct Time T1, T2, result;
int choice;

while (1) {
printf("\n--- MENU ---\n");
printf("1. Read Time\n");
printf("2. Display Time\n");
printf("3. Update Time (Increment by 1 second)\n");
printf("4. Add Two Times\n");
printf("5. Exit\n");
printf("Enter your choice: ");
scanf("%d", &choice);

switch (choice) {
case 1:
readTime(&T1);
break;

case 2:
displayTime(&T1);
break;

case 3:
updateTime(&T1);
printf("Time after update: ");
displayTime(&T1);
break;

case 4:
printf("\nEnter First Time:\n");
readTime(&T1);
printf("\nEnter Second Time:\n");
readTime(&T2);
result = addTime(&T1, &T2);
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    printf("\nResultant Time after addition: ");
    displayTime(&result);
    break;

    case 5:
    printf("Exiting program...\n");
    return 0;

    default:
    printf("Invalid choice! Please try again.\n");
    }
    }

    return 0;
    }

// Function to read time
void readTime(struct Time *t) {
    printf("Enter hour (0-23): ");
    scanf("%d", &t->hour);
    printf("Enter minute (0-59): ");
    scanf("%d", &t->minute);
    printf("Enter second (0-59): ");
    scanf("%d", &t->second);
    }

// Function to display time
void displayTime(struct Time *t) {
    printf("%02d:%02d:%02d\n", t->hour, t->minute, t->second);
    }

// Function to update time by one second
void updateTime(struct Time *t)
{
    t->second++;

    if (t->second >= 60)
    {
    t->minute += t->second / 60;
    t->second %= 60;
    }

    if (t->minute >= 60)
    {
    t->hour += t->minute / 60;
    t->minute %= 60;
    }

    if (t->hour >= 24)
    t->hour = 0;
    }

// Function to add two times
struct Time addTime(struct Time *t1, struct Time *t2) {
    struct Time result;

    result.second = t1->second + t2->second;
    result.minute = t1->minute + t2->minute + result.second / 60;
    result.second %= 60;

    result.hour = t1->hour + t2->hour + result.minute / 60;
    result.minute %= 60;
    result.hour %= 24;
```

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    return result;
}
```