**RESEARCH**

Tour Booking

 **Purpose**: The program is designed to collect user information for booking a tour, including personal details, travel preferences, payment methods, and tour package selection.

 **Structure**: The program follows a simple linear structure where it prompts the user for various inputs, stores these inputs in variables, and can print them out (if desired).

Reference Links:-

Expedia.com

Booking.com

Viator

GetYourGuide

Airbnb Experiences

**ANALYZE**

For this we use C language in which we use

**Variable Declarations**:

* **Data Types**:
  + Strings are stored using char arrays (e.g., char name[100]).
  + Integers are used for numerical inputs (e.g., int DOB, int phoneNumber).
* **Input Variables**: Each variable corresponds to a piece of information needed for the tour booking.

User Input:

* The program uses scanf to read user inputs. Special care is taken for string inputs that may contain spaces by using scanf(" %[^\n]", variable), which allows the user to enter a full name or address with spaces.
* For numeric inputs, scanf is used with %d format specifiers.

**IDEATE**

 **Personal Information**: Collects the user's full name, date of birth, gender, nationality, phone number, and email address.

 **Travel Details**: Collects information about the destination, preferred travel dates, and the number of travelers.

 **Payment Details**: Prompts the user to choose a payment method (credit card or bank transfer) and to enter their billing address.

 **Tour Package Agreement**: The user enters a code for the selected tour package.

**Flow of Execution**

1. The program starts and displays the title and introductory text.
2. It prompts the user to enter personal information, one field at a time.
3. After collecting all the required information, it prompts for travel details and payment details.
4. Finally, the program prints out all the collected information for the user to review.
5. The program ends cleanly.

**BUILD**

#include <stdio.h>

#include <string.h>

#include <ctype.h>

int isValidEmail(const char \*email) {

const char \*at = strchr(email, '@');

const char \*dot = strrchr(email, '.');

if (at != NULL && dot != NULL && at < dot) {

return 1;

}

return 0;

}

int isValidGender(const char \*gender) {

return (strcmp(gender, "male") == 0 || strcmp(gender, "female") == 0);

}

int isValidDate(int day, int month, int year) {

if (month < 1 || month > 12) {

return 0;

}

if (day < 1 || day > 31) {

return 0;

}

if (month == 2) {

if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0)) {

if (day > 29) return 0;

} else {

if (day > 28) return 0;

}

} else if (month == 4 || month == 6 || month == 9 || month == 11) {

if (day > 30) return 0;

}

return 1;

}

int isValidNationality(const char \*nationality) {

const char \*validNationalities[] = {

"indian",

"other than indian"

};

int size = sizeof(validNationalities) / sizeof(validNationalities[0]);

for (int i = 0; i < size; i++) {

if (strcmp(nationality, validNationalities[i]) == 0) {

return 1;

}

}

return 0;

}

int main() {

char name[50];

char gender[10];

char nationality[30];

char email[100];

char destination[50];

char paymentMethod[10];

int day,month,year;

char phoneNumber[11];

char travelDates[9];

int travelers;

int tourPackageCode;

printf(" TOUR BOOKING FORM ");

printf("\nPlease fill the following information: ");

printf("\n PERSONAL INFORMATION ");

printf("\nFull Name: ");

fgets(name, 50, stdin);

name[strcspn(name, "\n")] = 0;

while (1) {

printf("Enter your gender (male/female): ");

scanf("%s", gender);

if (isValidGender(gender)) {

printf("Gender is valid: %s\n", gender);

break;

} else {

printf("Invalid gender. Please try again.\n");

}

}

while (1) {

printf("Enter your nationality: ");

scanf("%s", nationality);

if (isValidNationality(nationality)) {

printf("Nationality is valid: %s\n", nationality);

break;

} else {

printf("Invalid nationality. Please try again.\n");

}

}

while (1) {

printf("\nEnter 10 digit Phone number: ");

scanf("%10s", phoneNumber);

if (strlen(phoneNumber) == 10) {

int isValid = 1;

for (int i = 0; i < 10; i++) {

if (!isdigit(phoneNumber[i])) {

isValid = 0;

break;

}

}

if (isValid) {

printf("The phone number %s is valid.\n", phoneNumber);

break;

} else {

printf("The phone number must contain only digits. Please try again.\n");

}

} else {

printf("The phone number must be exactly 10 digits long. Please try again.\n");

}

}

while (1) {

printf("Enter your email ID: ");

scanf("%s", email);

if (isValidEmail(email)) {

printf("Email ID is valid: %s\n", email);

break;

} else {

printf("Invalid email ID. Please try again.\n");

}

}

printf("\n TRAVEL DETAILS ");

printf("\nDestination: ");

scanf("%s", destination);

while (1) {

printf("Enter preferred starting travel date (first enter date then month then year): ");

scanf("%d %d %d", &day, &month, &year);

if (isValidDate(day, month, year)) {

printf("Date is valid: %02d/%02d/%04d\n", day, month, year);

break;

} else {

printf("Invalid date. Please try again.\n");

}

}

printf("\nNumber of Travelers: ");

scanf("%d", &travelers);

printf("\n PAYMENT DETAILS ");

printf("\nPayment Methods:");

printf("\n1. Credit card\n2. Bank transfer");

while (1) {

printf("\nEnter choice: ");

scanf("%s", paymentMethod);

if (strcmp(paymentMethod, "1") == 0 || strcmp(paymentMethod, "2") == 0) {

break;

} else {

printf("Enter a valid answer (1 for Credit card, 2 for Bank transfer).\n");

}

}

printf("\n TOUR PACKAGE AGREEMENT ");

printf("\nEnter code for tour package(please visit website for tour package code: ");

scanf("%d", &tourPackageCode);

printf("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

printf("\n--- Booking Summary ---\n");

printf("Name: %s\n",name);

printf("Gender: %s\n", gender);

printf("Nationality: %s\n", nationality);

printf("Phone: %s\n", phoneNumber);

printf("Email: %s\n", email);

printf("Destination: %s\n", destination);

printf("Preferred Dates: %s\n", travelDates);

printf("Number of travelers: %d\n", travelers);

printf("Payment Method: %s\n", paymentMethod);

printf("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

return 0;

}

**TEST**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--- Booking Summary ---

Name: Rugved

Gender: male

Nationality: indian

Phone: 9527650979

Email: r@gmail.com

Destination: Pune

Preferred Dates:

Number of travelers: 5

Payment Method: 2

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**IMPLEMENT**

Summary

Overall, this code serves as a straightforward user interface for collecting tour booking information. It demonstrates basic programming concepts such as variable declaration, user input handling, and output formatting in C. The structure is linear, making it easy to follow, but there are opportunities for improvement in error handling, data validation, and modularization for better maintainability and user experience.

Hence, this code can be used by many Tour booking Websites.

**GITHUB LINK - https://github.com/swaradadeshpande/TRAVEL-MADE-SIMPLE-BOOK-YOUR-TRIP-IN-MINUTES/upload/main**