PPS Assignment Unit-V

Code:-

```c
/* Coded by:-
   Akshat Gaur
   RA1911027010051
   CSE-BD  H-2
   1009
   PPS Assignment  */

#include <stdio.h>
#include <string.h>
struct Checkout_date
{
   int date,month,year;
};

struct return_date
{
   int date,month,year;
};

struct student_details
{
   char name[20],address[50];
   long phone;
   struct Checkout_date D[100];
   struct return_date RD[100];
};

struct book_details
{
   long Book_no;
   char Book_title[30],Author[15];
   char publisher[30];
   int Year_of_publication;
   char subject[15];
   struct student_details S[100];
   int status;
}B[2700];

int a,b,i=0,n=0;
```

```c
int whatuwannado()                    //checked
{
    printf("Welcome!\n");
    printf("Please choose the following options:\n1 = Add new books\n");
    printf("2 = Search the library by book number, author, title, subject, keywords\n");
    printf("3 = Remove outdated books (all books older than 15 years)\n");
    printf("4 = Checkout books\n5 = return book\n6 = End Programme\n");
    scanf("%d",&a);
    return a;
}

int add_new_books()                    //Checked
{
    printf("Please enter following details:\n");
    printf("Book Number: ");           scanf("%ld",&B[i].Book_no);
    printf("Book Title: ");            scanf(" %[^\n]%*c",B[i].Book_title);
    printf("Author: ");                scanf(" %[^\n]%*c",B[i].Author);
    printf("Publisher: ");             scanf(" %[^\n]%*c",B[i].publisher);
    printf("Year of Publiaction: ");   scanf("%d",&B[i].Year_of_publication);
    printf("Subject: ");               scanf(" %[^\n]%*c",B[i].subject);
    printf("Book status: Available\n");   B->status=1;
    i++;
}

void search_book_no()                    //Checked
{
    long no;
    printf("Please enter the Book Number: ");       scanf("%ld",&no);
    for(int j=0;j<=i;j++)
    {
        if(no==B[j].Book_no)
        {
            printf("Here are the details:\n");
            printf("Book Number: %ld",B[j].Book_no);
            printf("\nBook Title: %s",B[j].Book_title);
            printf("\nAuthor: %s",B[j].Author);
            printf("\nPublisher: %s",B[j].publisher);
            printf("\nYear of Publiaction: %d",B[j].Year_of_publication);
            printf("\nSubject: %s\n",B[j].subject);
            if(B[j].status==2)
            {
```

```c
            printf("Current status: Unavailable (Already issued by someone.)\n");
        }
        else if(B[j].status==3)
        {
            printf("Current status: Unavailable (The book is outdated!)\n");
        }
        else if(B[j].status==1)
        {
            printf("Current status: Available\n");
        }
        break;
    }
    }
}

void search_author()
{
    char author[30];
    int r=-1;
    printf("Please enter the name of author: ");        scanf(" %[^\n]%*c",author);
    for(int j=0;j<=i;j++)
    {
        r=strcmp(author,B[j].Author);
        if(r==0)
        {
            printf("Here are the details:\n");
            printf("Book Number: %ld",B[j].Book_no);
            printf("\nBook Title: %s",B[j].Book_title);
            printf("\nAuthor: %s",B[j].Author);
            printf("\nPublisher: %s",B[j].publisher);
            printf("\nYear of Publication: %d",B[j].Year_of_publication);
            printf("\nSubject: %s",B[j].subject);
            if(B[j].status==2)
            {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
            else if(B[j].status==3)
            {printf("\nCurrent status: Unavailable (The book is outdated!)\n");}
            else if(B[j].status==1)
            {printf("\nCurrent status: Available\n");}
            break;
        }
    }
}
```

```c
void search_title()                    //Checked
{
    char title[20];
    int r=-1;
    printf("Please enter the Book Title: ");        scanf(" %[^\n]%*c",title);
    for(int j=0;j<=i;j++)
    {
        r=strcmp(title,B[j].Book_title);
        if(r==0)
        {
            printf("Here are the details:\n");
            printf("Book Number: %ld",B[j].Book_no);
            printf("\nBook Title: %s",B[j].Book_title);
            printf("\nAuthor: %s",B[j].Author);
            printf("\nPublisher: %s",B[j].publisher);
            printf("\nYear of Publication: %d",B[j].Year_of_publication);
            printf("\nSubject: %s\n",B[j].subject);
            if(B[j].status==2)
            {printf("Current status: Unavailable (Already issued by someone.)\n");}
            else if(B[j].status==3)
            {printf("Current status: Unavailable (The book is outdated!)\n");}
            else if(B[j].status==1)
            {printf("Current status: Available\n");}
            break;
        }
    }
}

void search_subject()                  //checked
{
    char sub[20];
    int r=-1;
    printf("Please enter the Subject: ");        scanf(" %[^\n]%*c",sub);
    for(int j=0;j<=i;j++)
    {
        r=strcmp(sub,B[j].subject);
        if(r==0)
        {
            printf("Here are the details:\n");
            printf("Book Number: %ld",B[j].Book_no);
            printf("\nBook Title: %s",B[j].Book_title);
```

```c
          printf("\nAuthor: %s",B[j].Author);
          printf("\nPublisher: %s",B[j].publisher);
          printf("\nYear of Publication: %d",B[j].Year_of_publication);
          printf("\nSubject: %s",B[j].subject);
          if(B[j].status==2)
          {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
          else if(B[j].status==3)
          {printf("\nCurrent status: Unavailable (The book is outdated!)\n");}
          else if(B[j].status==1)
          {printf("\nCurrent status: Available\n");}
          break;
        }
    }
}

void search_keywords()
{
    char Key[15];
    printf("Please enter the keyword: ");          scanf("%s",Key);
    int r=-1,t=-1,s=-1,p=-1;
    for(int j=0;j<=i;j++)
    {
      for (char *p1 = strtok(B[j].Book_title," "); p1 != '\0'; p1 = strtok(NULL, " "))      //checked
      {
        t=strcmp(p1,Key);
        if(t==0)
        {
        printf("Here are the details:\n");
        printf("Book Number: %ld",B[j].Book_no);
        printf("\nBook Title: %s",B[j].Book_title);
        printf("\nAuthor: %s",B[j].Author);
        printf("\nPublisher: %s",B[j].publisher);
        printf("\nYear of Publication: %d",B[j].Year_of_publication);
        printf("\nSubject: %s",B[j].subject);
        if(B[j].status==2)
        {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
        else if(B[j].status==3)
        {printf("\nCurrent status: Unavailable (The book is outdated!)\n");}
        else if(B[j].status==1)
        {printf("\nCurrent status: Available\n");}
        }
      }
```

```c
for (char *p2 = strtok(B[j].Author," "); p2 != '\0'; p2 = strtok(NULL, " "))
{
    r=strcmp(p2,Key);
    if(r==0)
    {
    printf("Here are the details:\n");
    printf("Book Number: %ld",B[j].Book_no);
    printf("\nBook Title: %s",B[j].Book_title);
    printf("\nAuthor: %s",B[j].Author);
    printf("\nPublisher: %s",B[j].publisher);
    printf("\nYear of Publication: %d",B[j].Year_of_publication);
    printf("\nSubject: %s",B[j].subject);
    if(B[j].status==2)
    {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
    else if(B[j].status==3)
    {printf("\nCurrent status: Unavailable (The book is outdated!)\n");}
    else if(B[j].status==1)
    {printf("\nCurrent status: Available\n");}
    }
}

for (char *p3 = strtok(B[j].publisher," "); p3 != '\0'; p3 = strtok(NULL, " "))
{
    p=strcmp(p3,Key);
    if(p==0)
    {
    printf("Here are the details:\n");
    printf("Book Number: %ld",B[j].Book_no);
    printf("\nBook Title: %s",B[j].Book_title);
    printf("\nAuthor: %s",B[j].Author);
    printf("\nPublisher: %s",B[j].publisher);
    printf("\nYear of Publication: %d",B[j].Year_of_publication);
    printf("\nSubject: %s",B[j].subject);
    if(B[j].status==2)
    {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
    else if(B[j].status==3)
    {printf("\nCurrent status: Unavailable (The book is outdated!)\n");}
    else if(B[j].status==1)
    {printf("\nCurrent status: Available\n");}
    }
}
```

```c
        for (char *p4 = strtok(B[j].subject," "); p4 != '\0'; p4 = strtok(NULL, " "))
        {
            s=strcmp(p4,Key);
            if(s==0)
            {
            printf("Here are the details:\n");
            printf("Book Number: %ld",B[j].Book_no);
            printf("\nBook Title: %s",B[j].Book_title);
            printf("\nAuthor: %s",B[j].Author);
            printf("\nPublisher: %s",B[j].publisher);
            printf("\nYear of Publication: %d",B[j].Year_of_publication);
            printf("\nSubject: %s",B[j].subject);
            if(B[j].status==2)
            {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
            else if(B[j].status==3)
            {printf("\nCurrent status: Unavailable (The book is outdated!)\n");}
            else if(B[j].status==1)
            {printf("\nCurrent status: Available\n");}
            }
        }
    }

}

void search()
{
    printf("Search the library by :\n1 = book number\n2 = author\n3 = title\n4 = subject\n5 =
keywords\n");
    scanf("%d",&b);
    switch(b)
    {
        case 1:
        search_book_no();
        break;
        case 2:
        search_author();
        break;
        case 3:
        search_title();
        break;
        case 4:
```

```c
        search_subject();
        break;
        case 5:
        search_keywords();
        break;
        default:
        break;
    }
}

void remove_outdated_books()           //checked
{
    int y;
    printf("Enter Current year: ");     scanf("%d",&y);
    y=y-15;
    for(int j=0;j<i;j++)
    {
        if (B[j].Year_of_publication<y)
        {
            B[j].status=3;
            printf("\nThe Book %s is outdated.\n",B[j].Book_title);
        }
    }
}

void Checkout_books()                  // checked
{
    long no;
    printf("Please enter the Book Number: ");       scanf("%ld",&no);
    for(int j=0;j<=i;j++)
    {
        if(no==B[j].Book_no)
        {
            if(B[j].status==2 || B[j].status==3)
            {
                printf("Sorry this book is unavailable.\n");
            }
            else if(B[j].status==1)
            {
                printf("Please enter the following details: \n");
                printf("Name: ");      scanf(" %[^\n]%*c",B[j].S[n].name);
                printf("Address: ");  scanf(" %[^\n]%*c",B[j].S[n].address);
```
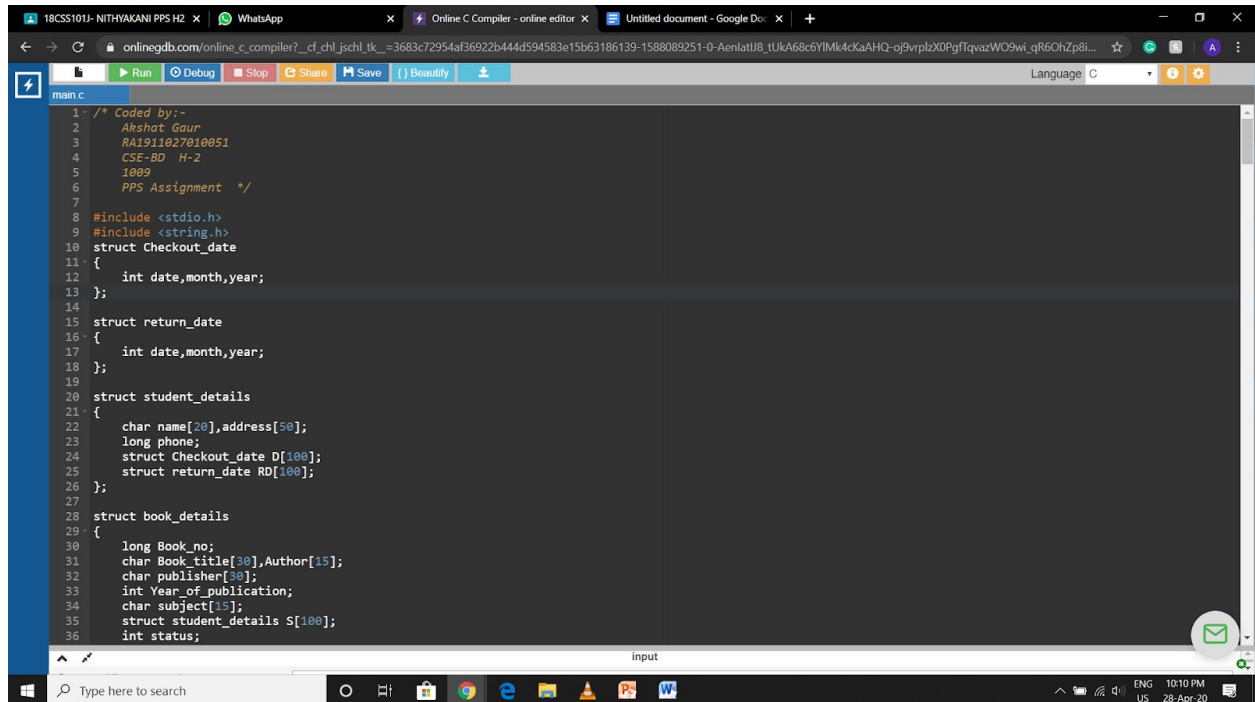
```c
            printf("Phone: ");     scanf("%ld",&B[j].S[n].phone);
            printf("Checkout date details: \n");
            printf("date: ");     scanf("%d",&B[j].S[n].D[n].date);
            printf("month: ");    scanf("%d",&B[j].S[n].D[n].month);
            printf("year: ");     scanf("%d",&B[j].S[n].D[n].year);
            printf("Return date details: \n");
            printf("date: ");     scanf("%d",&B[j].S[n].RD[n].date);
            printf("month: ");    scanf("%d",&B[j].S[n].RD[n].month);
            printf("year: ");     scanf("%d",&B[j].S[n].RD[n].year);
            printf("This Book is issued successfully by: %s\n",B[j].S[n].name);
            B[j].status=2;
            printf("Current Book status: Unavailable\n");
            n++;
        }
      }
    }
}
void return_books()                //checked
{
   char name[20];int r;
   printf("Please enter your name: ");      scanf("%s",name);
   for(int j=0;j<=i;j++)
   {
      for(int k=0;k<=n;k++)
      {
         r=strcmp(name,B[j].S[k].name);
         if(r==0)
         {
            printf("Book details: \nBook Number: %ld",B[j].Book_no);
            printf("\nBook Title: %s",B[j].Book_title);
            printf("\nAuthor: %s",B[j].Author);
            printf("\nIssued by: \nName: %s",B[j].S[k].name);
            printf("\nAddress: %s",B[j].S[k].address);
            printf("\nPhone: %ld",B[j].S[k].phone);
            printf("\nThis book is returned successfully!");
            printf("\nCurrent Book status: Available\n");
            B[j].status=1;
            break;
         }
      }
   }
}
```
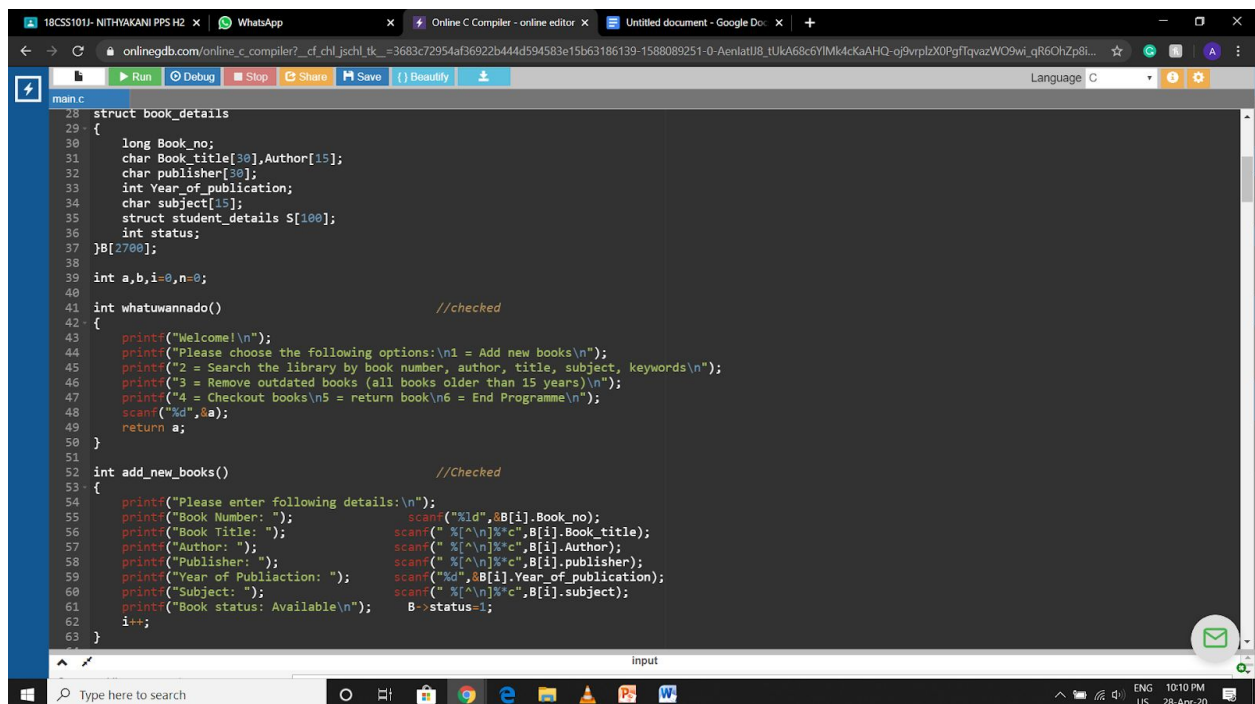
```c
int main()
{
    start:
    a=whatuwannado();
    switch(a)
    {
        case 1:
        add_new_books();
        break;
        case 2:
        search();
        break;
        case 3:
        remove_outdated_books();
        break;
        case 4:
        Checkout_books();
        break;
        case 5:
        return_books();
        break;
        case 6:
        goto end;
        break;
        default:;
    }
    goto start;

    end:
    printf("Programme ended. Have a nice day :-)");
    return 0;
}
```

Code Pics

```c
65  void search_book_no()                           //Checked
66  {
67      long no;
68      printf("Please enter the Book Number: ");        scanf("%ld",&no);
69      for(int j=0;j<=i;j++)
70      {
71          if(no==B[j].Book_no)
72          {
73              printf("Here are the details:\n");
74              printf("Book Number: %ld",B[j].Book_no);
75              printf("\nBook Title: %s",B[j].Book_title);
76              printf("\nAuthor: %s",B[j].Author);
77              printf("\nPublisher: %s",B[j].publisher);
78              printf("\nYear of Publiaction: %d",B[j].Year_of_publication);
79              printf("\nSubject: %s\n",B[j].subject);
80              if(B[j].status==2)
81              {
82                  printf("Current status: Unavailable (Already issued by someone.)\n");
83              }
84              else if(B[j].status==3)
85              {
86                  printf("Current status: Unavailable (The book is outdated!)\n");
87              }
88              else if(B[j].status==1)
89              {
90                  printf("Current status: Available\n");
91              }
92              break;
93          }
94      }
95  }
96
97  void search_author()
98  {
99      char author[30];
100     int r=-1;
```

Screenshot 2

```c
97  void search_author()
98  {
99      char author[30];
100     int r=-1;
101     printf("Please enter the name of author: ");        scanf(" %[^\n]%*c",author);
102     for(int j=0;j<=i;j++)
103     {
104         r=strcmp(author,B[j].subject);
105         if(r==0)
106         {
107             printf("Here are the details:\n");
108             printf("Book Number: %ld",B[j].Book_no);
109             printf("\nBook Title: %s",B[j].Book_title);
110             printf("\nAuthor: %s",B[j].Author);
111             printf("\nPublisher: %s",B[j].publisher);
112             printf("\nYear of Publiaction: %d",B[j].Year_of_publication);
113             printf("\nSubject: %s",B[j].subject);
114             if(B[j].status==2)
115             {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
116             else if(B[j].status==3)
117             {printf("\nCurrent status: Unavailable (The book is outdated!)\n");}
118             else if(B[j].status==1)
119             {printf("\nCurrent status: Available\n");}
120             break;
121         }
122     }
123 }
124
125 void search_title()                           //Checked
126 {
127     char title[20];
128     int r=-1;
129     printf("Please enter the Book Title: ");        scanf(" %[^\n]%*c",title);
130     for(int j=0;j<=i;j++)
131     {
132         r=strcmp(title,B[j].subject);
```

```c
125  void search_title()                              //Checked
126  {
127      char title[20];
128      int r=-1;
129      printf("Please enter the Book Title: ");        scanf(" %[^\n]%*c",title);
130      for(int j=0;j<=i;j++)
131      {
132          r=strcmp(title,B[j].subject);
133          if(r==0)
134          {
135              printf("Here are the details:\n");
136              printf("Book Number: %ld",B[j].Book_no);
137              printf("\nBook Title: %s",B[j].Book_title);
138              printf("\nAuthor: %s",B[j].Author);
139              printf("\nPublisher: %s",B[j].publisher);
140              printf("\nYear of Publiaction: %d",B[j].Year_of_publication);
141              printf("\nSubject: %s\n",B[j].subject);
142              if(B[j].status==2)
143              {printf("Current status: Unavailable (Already issued by someone.)\n");}
144              else if(B[j].status==3)
145              {printf("Current status: Unavailable (The book is outdated!)\n");}
146              else if(B[j].status==1)
147              {printf("Current status: Available\n");}
148              break;
149          }
150      }
151  }
152
153  void search_subject()
154  {
155      char sub[20];
156      int r=-1;
157      printf("Please enter the Subject: ");        scanf(" %[^\n]%*c",sub);
158      for(int j=0;j<=i;j++)
159      {
160          r=strcmp(sub,B[j].subject);
```

```c
153  void search_subject()
154  {
155      char sub[20];
156      int r=-1;
157      printf("Please enter the Subject: ");        scanf(" %[^\n]%*c",sub);
158      for(int j=0;j<=i;j++)
159      {
160          r=strcmp(sub,B[j].subject);
161          if(r==0)
162          {
163              printf("Here are the details:\n");
164              printf("Book Number: %ld",B[j].Book_no);
165              printf("\nBook Title: %s",B[j].Book_title);
166              printf("\nAuthor: %s",B[j].Author);
167              printf("\nPublisher: %s",B[j].publisher);
168              printf("\nYear of Publiaction: %d",B[j].Year_of_publication);
169              printf("\nSubject: %s",B[j].subject);
170              if(B[j].status==2)
171              {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
172              else if(B[j].status==3)
173              {printf("\nCurrent status: Unavailable (The book is outdated!)\n");}
174              else if(B[j].status==1)
175              {printf("\nCurrent status: Available\n");}
176              break;
177          }
178      }
179  }
180
181  void search_keywords()
182  {
183      char Key[15];
184      printf("Please enter the keyword: ");            scanf("%s",Key);
185      int r=-1,t=-1,s=-1,p=-1;
186      for(int j=0;j<=i;j++)
187      {
188          for (char *p1 = strtok(B[j].Book_title," "); p1 != '\0'; p1 = strtok(NULL, " "))        //checked
```

```c
181  void search_keywords()
182  {
183      char Key[15];
184      printf("Please enter the keyword: ");              scanf("%s",Key);
185      int r=-1,t=-1,s=-1,p=-1;
186      for(int j=0;j<=i;j++)
187      {
188          for (char *p1 = strtok(B[j].Book_title," "); p1 != '\0'; p1 = strtok(NULL, " "))        //checked
189          {
190              t=strcmp(p1,Key);
191              if(t==0)
192              {
193              printf("Here are the details:\n");
194              printf("Book Number: %ld",B[j].Book_no);
195              printf("\nBook Title: %s",B[j].Book_title);
196              printf("\nAuthor: %s",B[j].Author);
197              printf("\nPublisher: %s",B[j].publisher);
198              printf("\nYear of Publiaction: %d",B[j].Year_of_publication);
199              printf("\nSubject: %s",B[j].subject);
200              if(B[j].status==2)
201              {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
202              else if(B[j].status==3)
203              {printf("\nCurrent status: Unavailable (The book is outdated!)\n");}
204              else if(B[j].status==1)
205              {printf("\nCurrent status: Available\n");}
206              }
207          }
208
209          for (char *p2 = strtok(B[j].Author," "); p2 != '\0'; p2 = strtok(NULL, " "))
210          {
211              r=strcmp(p2,Key);
212              if(r==0)
213              {
214              printf("Here are the details:\n");
215              printf("Book Number: %ld",B[j].Book_no);
216              printf("\nBook Title: %s",B[j].Book_title);
```

```c
209          for (char *p2 = strtok(B[j].Author," "); p2 != '\0'; p2 = strtok(NULL, " "))
210          {
211              r=strcmp(p2,Key);
212              if(r==0)
213              {
214              printf("Here are the details:\n");
215              printf("Book Number: %ld",B[j].Book_no);
216              printf("\nBook Title: %s",B[j].Book_title);
217              printf("\nAuthor: %s",B[j].Author);
218              printf("\nPublisher: %s",B[j].publisher);
219              printf("\nYear of Publiaction: %d",B[j].Year_of_publication);
220              printf("\nSubject: %s",B[j].subject);
221              if(B[j].status==2)
222              {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
223              else if(B[j].status==3)
224              {printf("\nCurrent status: Unavailable (The book is outdated!)\n");}
225              else if(B[j].status==1)
226              {printf("\nCurrent status: Available\n");}
227              }
228          }
229
230          for (char *p3 = strtok(B[j].publisher," "); p3 != '\0'; p3 = strtok(NULL, " "))
231          {
232              p=strcmp(p3,Key);
233              if(p==0)
234              {
235              printf("Here are the details:\n");
236              printf("Book Number: %ld",B[j].Book_no);
237              printf("\nBook Title: %s",B[j].Book_title);
238              printf("\nAuthor: %s",B[j].Author);
239              printf("\nPublisher: %s",B[j].publisher);
240              printf("\nYear of Publiaction: %d",B[j].Year_of_publication);
241              printf("\nSubject: %s",B[j].subject);
242              if(B[j].status==2)
243              {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
244              else if(B[j].status==3)
```

18CSS101J- NITHYAKANI PPS H2 × | WhatsApp × | Online C Compiler - online editor × | Untitled document - Google Doc × | +

onlinegdb.com/online_c_compiler?_cf_chl_jschl_tk__=3683c72954af36922b444d594583e15b63186139-1588089251-0-AenlatIJ8_tUkA68c6YlMk4cKaAHQ-oj9vrplzX0PgfTqvazWO9wi_qR6OhZp8i...

▶ Run | ⊘ Debug | ■ Stop | ⎈ Share | 💾 Save | {} Beautify | 📥 | Language C ▾

main.c

```c
230     for (char *p3 = strtok(B[j].publisher," "); p3 != '\0'; p3 = strtok(NULL, " "))
231     {
232         p=strcmp(p3,Key);
233         if(p==0)
234         {
235         printf("Here are the details:\n");
236         printf("Book Number: %ld",B[j].Book_no);
237         printf("\nBook Title: %s",B[j].Book_title);
238         printf("\nAuthor: %s",B[j].Author);
239         printf("\nPublisher: %s",B[j].publisher);
240         printf("\nYear of Publiaction: %d",B[j].Year_of_publication);
241         printf("\nSubject: %s",B[j].subject);
242         if(B[j].status==2)
243         {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
244         else if(B[j].status==3)
245         {printf("\nCurrent status: Unavailable (The book is outdated!)\n");}
246         else if(B[j].status==1)
247         {printf("\nCurrent status: Available\n");}
248         }
249     }
250
251     for (char *p4 = strtok(B[j].subject," "); p4 != '\0'; p4 = strtok(NULL, " "))
252     {
253         s=strcmp(p4,Key);
254         if(s==0)
255         {
256         printf("Here are the details:\n");
257         printf("Book Number: %ld",B[j].Book_no);
258         printf("\nBook Title: %s",B[j].Book_title);
259         printf("\nAuthor: %s",B[j].Author);
260         printf("\nPublisher: %s",B[j].publisher);
261         printf("\nYear of Publiaction: %d",B[j].Year_of_publication);
262         printf("\nSubject: %s",B[j].subject);
263         if(B[j].status==2)
264         {printf("\nCurrent status: Unavailable (Already issued by someone.)\n");}
265         else if(B[j].status==3)
```

18CSS101J- NITHYAKANI PPS H2 × | WhatsApp × | Online C Compiler - online editor × | Untitled document - Google Doc × | +

onlinegdb.com/online_c_compiler?_cf_chl_jschl_tk__=3683c72954af36922b444d594583e15b63186139-1588089251-0-AenlatIJ8_tUkA68c6YlMk4cKaAHQ-oj9vrplzX0PgfTqvazWO9wi_qR6OhZp8i...

▶ Run | ⊘ Debug | ■ Stop | ⎈ Share | 💾 Save | {} Beautify | 📥 | Language C ▾

main.c

```c
266         {printf("\nCurrent status: Unavailable (The book is outdated!)\n");}
267         else if(B[j].status==1)
268         {printf("\nCurrent status: Available\n");}
269         }
270     }
271     }
272
273 }
274
275 void search()
276 {
277     printf("Search the library by :\n1 = book number\n2 = author\n3 = title\n4 = subject\n5 = keywords\n");
278     scanf("%d",&b);
279     switch(b)
280     {
281         case 1:
282         search_book_no();
283         break;
284         case 2:
285         search_author();
286         break;
287         case 3:
288         search_title();
289         break;
290         case 4:
291         search_subject();
292         break;
293         case 5:
294         search_keywords();
295         break;
296         default:
297         break;
298     }
299 }
300
301 void remove_outdated_books()          //checked
```

```c
301  void remove_outdated_books()                    //checked
302  {
303      int y;
304      printf("Enter Current year: ");      scanf("%d",&y);
305      y=y-15;
306      for(int j=0;j<=i;j++)
307      {
308          if (B[j].Year_of_publication<y)
309          {
310              B[j].status=3;
311              printf("\nThe Book %s is outdated.\n",B[j].Book_title);
312          }
313      }
314  }
315
316  void Checkout_books()                    // checked
317  {
318      long no;
319      printf("Please enter the Book Number: ");      scanf("%ld",&no);
320      for(int j=0;j<=i;j++)
321      {
322          if(no==B[j].Book_no)
323          {
324              if(B[j].status==2 || B[j].status==3)
325              {
326                  printf("Sorry this book is unavailable.\n");
327              }
328              else if(B[j].status==1)
329              {
330                  printf("Please enter the following details: \n");
331                  printf("Name: ");        scanf(" %[^\n]%*c",B[j].S[n].name);
332                  printf("Address: ");   scanf(" %[^\n]%*c",B[j].S[n].address);
333                  printf("Phone: ");     scanf("%ld",&B[j].S[n].phone);
334                  printf("Checkout date details: \n");
335                  printf("date: ");        scanf("%d",&B[j].S[n].D[n].date);
336                  printf("month: ");     scanf("%d",&B[j].S[n].D[n].month);
```

```c
316  void Checkout_books()                    // checked
317  {
318      long no;
319      printf("Please enter the Book Number: ");      scanf("%ld",&no);
320      for(int j=0;j<=i;j++)
321      {
322          if(no==B[j].Book_no)
323          {
324              if(B[j].status==2 || B[j].status==3)
325              {
326                  printf("Sorry this book is unavailable.\n");
327              }
328              else if(B[j].status==1)
329              {
330                  printf("Please enter the following details: \n");
331                  printf("Name: ");        scanf(" %[^\n]%*c",B[j].S[n].name);
332                  printf("Address: ");   scanf(" %[^\n]%*c",B[j].S[n].address);
333                  printf("Phone: ");     scanf("%ld",&B[j].S[n].phone);
334                  printf("Checkout date details: \n");
335                  printf("date: ");        scanf("%d",&B[j].S[n].D[n].date);
336                  printf("month: ");     scanf("%d",&B[j].S[n].D[n].month);
337                  printf("year: ");        scanf("%d",&B[j].S[n].D[n].year);
338                  printf("Return date details: \n");
339                  printf("date: ");        scanf("%d",&B[j].S[n].RD[n].date);
340                  printf("month: ");     scanf("%d",&B[j].S[n].RD[n].month);
341                  printf("year: ");        scanf("%d",&B[j].S[n].RD[n].year);
342                  printf("This Book is issued successfully by: %s\n",B[j].S[n].name);
343                  B[j].status=2;
344                  printf("Current Book status: Unvailable\n");
345                  n++;
346              }
347          }
348      }
349  }
350  void return_books()                      //checked
351  {
```
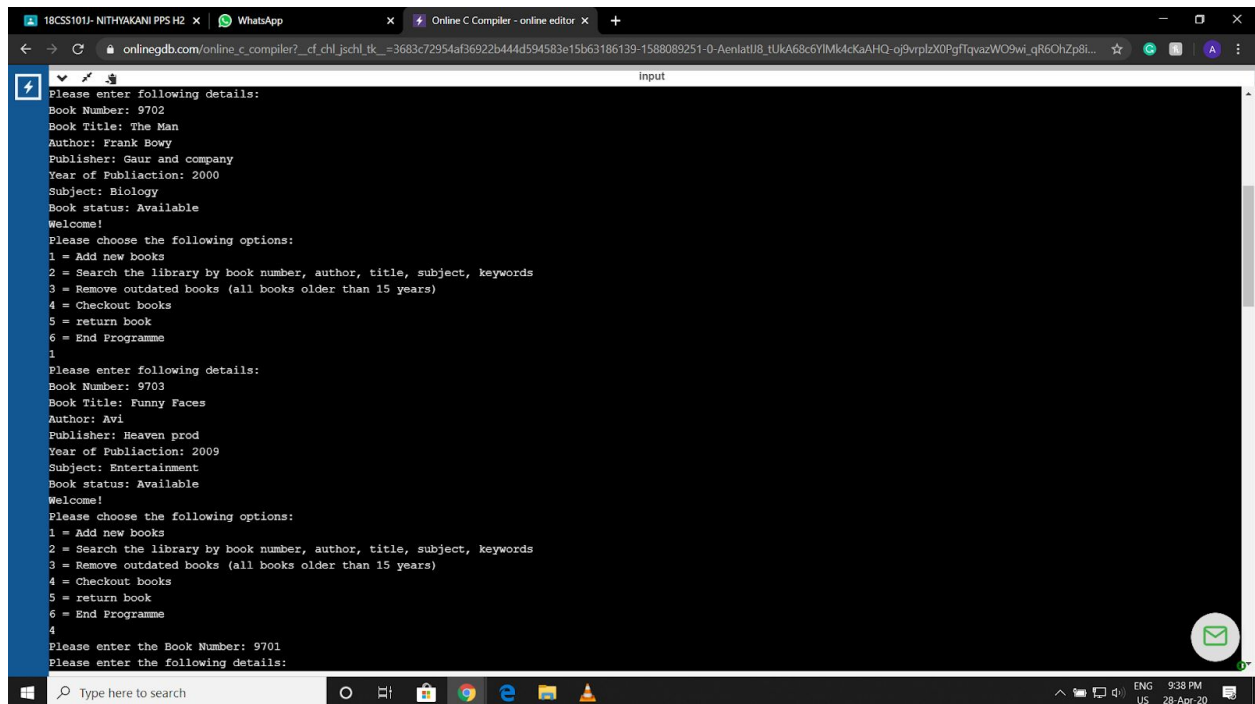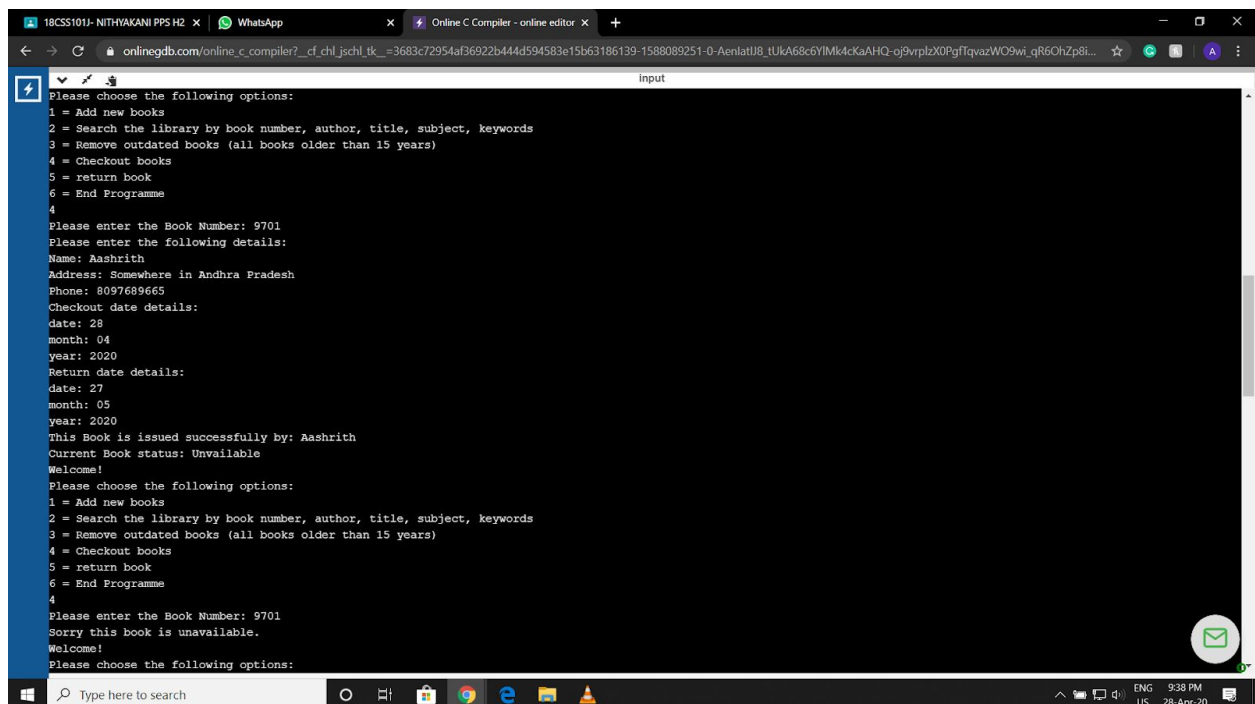
```c
350  void return_books()                        //checked
351  {
352      char name[20];int r;
353      printf("Please enter your name: ");          scanf("%s",name);
354      for(int j=0;j<=i;j++)
355      {
356          for(int k=0;k<=n;k++)
357          {
358              r=strcmp(name,B[j].S[k].name);
359              if(r==0)
360              {
361                  printf("Book details: \nBook Number: %ld",B[j].Book_no);
362                  printf("\nBook Title: %s",B[j].Book_title);
363                  printf("\nAuthor: %s",B[j].Author);
364                  printf("\nIssued by: \nName: %s",B[j].S[k].name);
365                  printf("\nAddress: %s",B[j].S[k].address);
366                  printf("\nPhone: %ld",B[j].S[k].phone);
367                  printf("\nThis book is returned successfully!");
368                  printf("\nCurrent Book status: Available\n");
369                  B[j].status=1;
370                  break;
371              }
372          }
373      }
374  }
375
376  int main()
377  {
378      start:
379      a=whatuwannado();
380      switch(a)
381      {
382          case 1:
383          add_new_books();
384          break;
385          case 2:
```

```c
372          }
373      }
374  }
375
376  int main()
377  {
378      start:
379      a=whatuwannado();
380      switch(a)
381      {
382          case 1:
383          add_new_books();
384          break;
385          case 2:
386          search();
387          break;
388          case 3:
389          remove_outdated_books();
390          break;
391          case 4:
392          Checkout_books();
393          break;
394          case 5:
395          return_books();
396          break;
397          case 6:
398          goto end;
399          break;
400          default::
401      }
402      goto start;
403
404      end:
405      printf("Programme ended. Have a nice day :-)");
406      return 0;
407  }
```

Output Pics

Please enter following details:
Book Number: 9702
Book Title: The Man
Author: Frank Bowy
Publisher: Gaur and company
Year of Publiaction: 2000
Subject: Biology
Book status: Available
Welcome!
Please choose the following options:
1 = Add new books
2 = Search the library by book number, author, title, subject, keywords
3 = Remove outdated books (all books older than 15 years)
4 = Checkout books
5 = return book
6 = End Programme
1
Please enter following details:
Book Number: 9703
Book Title: Funny Faces
Author: Avi
Publisher: Heaven prod
Year of Publiaction: 2009
Subject: Entertainment
Book status: Available
Welcome!
Please choose the following options:
1 = Add new books
2 = Search the library by book number, author, title, subject, keywords
3 = Remove outdated books (all books older than 15 years)
4 = Checkout books
5 = return book
6 = End Programme
4
Please enter the Book Number: 9701
Please enter the following details:

Please choose the following options:
1 = Add new books
2 = Search the library by book number, author, title, subject, keywords
3 = Remove outdated books (all books older than 15 years)
4 = Checkout books
5 = return book
6 = End Programme
4
Please enter the Book Number: 9701
Please enter the following details:
Name: Aashrith
Address: Somewhere in Andhra Pradesh
Phone: 8097689665
Checkout date details:
date: 28
month: 04
year: 2020
Return date details:
date: 27
month: 05
year: 2020
This Book is issued successfully by: Aashrith
Current Book status: Unvailable
Welcome!
Please choose the following options:
1 = Add new books
2 = Search the library by book number, author, title, subject, keywords
3 = Remove outdated books (all books older than 15 years)
4 = Checkout books
5 = return book
6 = End Programme
4
Please enter the Book Number: 9701
Sorry this book is unavailable.
Welcome!
Please choose the following options:

18CSS101J- NITHYAKANI PPS H2 × | WhatsApp × | Online C Compiler - online editor × +

onlinegdb.com/online_c_compiler?__cf_chl_jschl_tk__=3683c72954af36922b444d594583e15b63186139-1588089251-0-AenlatIJ8_tUkA68c6YlMk4cKaAHQ-oj9vrplzX0PgfTqvazWO9wi_qR6OhZp8i...

input

```
Sorry this book is unavailable.
Welcome!
Please choose the following options:
1 = Add new books
2 = Search the library by book number, author, title, subject, keywords
3 = Remove outdated books (all books older than 15 years)
4 = Checkout books
5 = return book
6 = End Programme
3
Enter Current year: 2020

The Book The Man is outdated.

The Book  is outdated.
Welcome!
Please choose the following options:
1 = Add new books
2 = Search the library by book number, author, title, subject, keywords
3 = Remove outdated books (all books older than 15 years)
4 = Checkout books
5 = return book
6 = End Programme
5
Please enter your name: Aashrith
Book details:
Book Number: 9701
Book Title: Sleep like baby
Author: Akshat Gaur
Issued by:
Name: Aashrith
Address: Somewhere in Andhra Pradesh
Phone: 8097689665
This book is returned successfully!
Current Book status: Available
Welcome!
```

18CSS101J- NITHYAKANI PPS H2 × | WhatsApp × | Online C Compiler - online editor × +

onlinegdb.com/online_c_compiler?__cf_chl_jschl_tk__=3683c72954af36922b444d594583e15b63186139-1588089251-0-AenlatIJ8_tUkA68c6YlMk4cKaAHQ-oj9vrplzX0PgfTqvazWO9wi_qR6OhZp8i...

input

```
Welcome!
Please choose the following options:
1 = Add new books
2 = Search the library by book number, author, title, subject, keywords
3 = Remove outdated books (all books older than 15 years)
4 = Checkout books
5 = return book
6 = End Programme
2
Search the library by :
1 = book number
2 = author
3 = title
4 = subject
5 = keywords
5
Please enter the keyword: Gaur
Here are the details:
Book Number: 9701
Book Title: Sleep
Author: Akshat
Publisher: Gupta Ji productions
Year of Publiaction: 2019
Subject: English
Current status: Available
Here are the details:
Book Number: 9702
Book Title: The
Author: Frank
Publisher: Gaur
Year of Publiaction: 2000
Subject: Biology
Current status: Unavailable (The book is outdated!)
Welcome!
Please choose the following options:
1 = Add new books
```

```
input
1 = book number
2 = author
3 = title
4 = subject
5 = keywords
5
Please enter the keyword: Gaur
Here are the details:
Book Number: 9701
Book Title: Sleep
Author: Akshat
Publisher: Gupta Ji productions
Year of Publiaction: 2019
Subject: English
Current status: Available
Here are the details:
Book Number: 9702
Book Title: The
Author: Frank
Publisher: Gaur
Year of Publiaction: 2000
Subject: Biology
Current status: Unavailable (The book is outdated!)
Welcome!
Please choose the following options:
1 = Add new books
2 = Search the library by book number, author, title, subject, keywords
3 = Remove outdated books (all books older than 15 years)
4 = Checkout books
5 = return book
6 = End Programme
6
Programme ended. Have a nice day :-)

...Program finished with exit code 0
Press ENTER to exit console.
```

```c
42  {
43      printf("Welcome!\n");
44      printf("Please choose the following options:\n1 = Add new books\n");
45      printf("2 = Search the library by book number, author, title, subject, keywords\n");
46      printf("3 = Remove outdated books (all books older than 15 years)\n");
```

```
input
Welcome!
Please choose the following options:
1 = Add new books
2 = Search the library by book number, author, title, subject, keywords
3 = Remove outdated books (all books older than 15 years)
4 = Checkout books
5 = return book
6 = End Programme
1
Please enter following details:
Book Number: 9701
Book Title: Sleep like baby
Author: Akshat Gaur
Publisher: Gupta Ji productions
Year of Publiaction: 2019
Subject: English
Book status: Available
Welcome!
Please choose the following options:
1 = Add new books
2 = Search the library by book number, author, title, subject, keywords
3 = Remove outdated books (all books older than 15 years)
4 = Checkout books
5 = return book
6 = End Programme
1
Please enter following details:
Book Number: 9702
```

THANK YOU

Submitted by:-   Akshat Gaur
Reg. no.:-   RA1911027010051
Class:-   CSE-BD   Sec.:-H-2
Classroom:-   1009
Subject:-   PPS