ASSIGNMENT-1

By

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2023a6r036

1st sem

Computer science and engineering

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(Permanently Affiliated to the University of Jammu, Accredited by NAAC with "A" Grade)

Jammu, India

2023

Q1: Group- 6

1. Find The No. of Books Can Buy From 'N' Books List With Given Cost

Description:

Mr. Nivas gifted with Rs.m by his father and suggested to buy books.

Then Mr. Nivas decided he want to spend complete amount to buy only books.

He went to shop and found 'n' number of books and get confused which book or find any two books can buy with that amount.

Example:

6

45 32 46 55 33 22

100

Pair found (45, 55)

Explanation:

return the costs of any two books if cost equals to that amount

return -1 if not possible to buy any two books

Ans.

```
#include <stdio.h>

int main()

{

   int costOfBooks[100], flag, numBooks, n, moneyAmt;

   printf("Enter the amount of money Mr Nivas has:");

   scanf("%d", &moneyAmt);

   printf("\nEnter the number of books:");

   scanf("%d", &numBooks);

   for (flag=0; flag<numBooks; flag++)

   {

      printf("\nEnter the cost of book %d:", flag+1);

      scanf("%d", &costOfBooks[flag]);

   }

   printf("\nNow, let's see the available combinations of books which Mr Nivas can buy");

   for (flag=0; flag<numBooks; flag++)

   for (n=flag+1; n<numBooks; n++)

   {

      if (moneyAmt==(costOfBooks[n]+costOfBooks[flag]))

      {

         printf("\nPair Found (%d, %d)\n");
```

```
    }
else return -1;
  }
}
```

```
PS C:\Users\dell\OneDrive\Desktop\Avengers Game> cd "c:\Users\dell\OneDrive\Desktop\Avengers Game\.vsco
cc pracprob1nivas.c -o pracprob1nivas } ; if ($?) { .\pracprob1nivas }
Enter the amount of money Mr Nivas has: 100

Enter the number of books: 4

Enter the cost of book 1: 15

Enter the cost of book 2: 85

Enter the cost of book 3: 90

Enter the cost of book 4: 45

Now, let's see the available combinations of books which Mr Nivas can buy
Pair Found (85, 15)                                    cd "c:\Users\dell\OneDrive\Desktop\Avengers Ga
```

2. Write the program for print largest three digit jumping number.

Ans.

```
#include <stdio.h>
#include <stdbool.h>

bool isJumpingNumber(int num) {
    int temp = num % 10;
    num /= 10;

    while (num > 0) {
        int digit = num % 10;
        if (!(digit - temp == 1 || digit - temp == -1)) {
            return false;
        }
        temp = digit;
        num /= 10;
    }

    return true;
}

int main() {
    int largestJumpingNumber = -1;

    for (int num = 999; num >= 100; --num) {
        if (isJumpingNumber(num)) {
            largestJumpingNumber = num;
            break;
        }
    }
```

```
    if (largestJumpingNumber != -1) {
        printf("The largest 3-digit jumping number is: %d\n", largestJumpingNumber);
    } else {
        printf("No jumping number found in the range of 3-digit numbers.\n");
    }

    return 0;
}
```

```
PS C:\Users\dell> cd "c:\Users\dell\OneDrive\Desktop\Avengers Game\" ; if ($?) { gcc checkjupmingnumb
number } ; if ($?) { .\checkjupmingnumber }
The largest 3-digit jumping number is: 989
```