5.DLL Program

Execution:

1. javac B1.java
2. javac -h . B1.java
3. gcc -shared -fPIC -I/usr/lib/jvm/java-8-openjdk-amd64/include -I/usr/lib/jvm/java-8-openjdk-amd64/include/linux B1.c -o b1.so
4. java -Djava.library.path=.B1

B1.java:

```
import java.io.*;

import java.util.*;

class B1 {

static {

System.load("/home/anandkale/Desktop/Sample/dll/b1.so");

}

private native int add(int a, int b);

private native int sub(int a, int b);

private native int mult(int a, int b);

private native int div(int a, int b);

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

int a, b,ch;

System.out.println("\nEnter value of a : ");

a = sc.nextInt();

System.out.println("\nEnter value of b : ");

b = sc.nextInt();

do

{

System.out.println("\nENTER YOUR CHOICE : ");

ch = sc.nextInt();

switch(ch)

{
```

```java
case 1 : new B1().add(a,b);
break;
case 2 : new B1().sub(a,b);
break;
case 3 : new B1().mult(a,b);
break;
case 4 : new B1().div(a,b);
break;
default : System.out.println("Your choice is wrong.");
}
}while(ch<5);
}
}
```

B1.h:

```c
/* DO NOT EDIT THIS FILE - it is machine generated */
#include <jni.h>
/* Header for class B1 */

#ifndef _Included_B1
#define _Included_B1
#ifdef __cplusplus
extern "C" {
#endif
/*
 * Class:    B1
 * Method:   add
 * Signature: (II)I
 */
JNIEXPORT jint JNICALL Java_B1_add
  (JNIEnv *, jobject, jint, jint);
```

```c
/*
 * Class:    B1
 * Method:   sub
 * Signature: (II)I
 */
JNIEXPORT jint JNICALL Java_B1_sub
  (JNIEnv *, jobject, jint, jint);

/*
 * Class:    B1
 * Method:   mult
 * Signature: (II)I
 */
JNIEXPORT jint JNICALL Java_B1_mult
  (JNIEnv *, jobject, jint, jint);

/*
 * Class:    B1
 * Method:   div
 * Signature: (II)I
 */
JNIEXPORT jint JNICALL Java_B1_div
  (JNIEnv *, jobject, jint, jint);

#ifdef __cplusplus
}
#endif
#endif
```

B1.c:

```c
#include <jni.h>

#include <stdio.h>

#include "B1.h"

JNIEXPORT int JNICALL Java_B1_add(JNIEnv *env, jobject obj, jint a, jint b)

{

printf("\n%d + %d = %d\n",a,b,(a+b));

return;

}

JNIEXPORT int JNICALL Java_B1_sub(JNIEnv *env, jobject obj, jint a, jint b)

{

printf("\n%d - %d = %d\n",a,b,(a-b));

return;

}

JNIEXPORT int JNICALL Java_B1_mult(JNIEnv *env, jobject obj, jint a, jint b)

{

printf("\n%d * %d = %d\n",a,b,(a*b));

return;

}

JNIEXPORT int JNICALL Java_B1_div(JNIEnv *env, jobject obj, jint a, jint b)

{

printf("\n%d / %d = %d\n",a,b,(a/b));

return;

}
```