**Assignment.**

1. **Sum of Digits**

**public** **class** ECC\_01\_SumOfDigits {

**public** **static** **void** main(String[] args) {

**int** num = 67;

System.***out***.println(*getSumOfDigits*(num));

}

**public** **static** **int** getSumOfDigits(**int** num) {

**int** number = num;

**if** (number>=10 && number<=99){

**int** lastdigit = number%10;

**int** firstdigit= (number-lastdigit)/10;

**int** sum = firstdigit+lastdigit;

**return** sum;

}**else** **if**(number<0){

**return** -3;

}**else** **if**(number>99){

**return** -2;

}**else** {

**return** -1;

}

}

}

1. **DigitChecker**

**public** **class** ECC\_02\_DigitChecker {

**public** **static** **void** main(String[] args){

**int** num = 46;

System.***out***.println(*getDiffOfDigits*(num));

}

**public** **static** **int** getDiffOfDigits(**int** num){

**int** number =num;

**if** (number >=10 && number <= 99){

**int** lastdigit = number % 10;

**int** firstdigit = (number-lastdigit)/10;

**int** difference = firstdigit - lastdigit;

**if**(difference < 0){

**return** -3;

}

**else**{

**return** difference;

}}

**else** **if** (number>99){

**return** -2;

}**else** {

**return** -1;

}

}

1. **Multiple of 100**

**public** **class** ECC\_03\_MultipleOf100 {

**public** **static** **void** main(String[] args) {

**int** num = 123;

System.***out***.println(*getNextMultipleOf100*(num));

}

**public** **static** **int** getNextMultipleOf100(**int** num){

**int** number =num;

**if** (number > 0 ){

**int** result = number / 100;

**return** (result+1)\*100;

}**else**{

**return** -1;

}

}

}

1. **Is Palindrome**

**public** **class** ECC\_04\_Palindrome {

**public** **static** **void** main(String[] args) {

**int** num= 6789;

System.***out***.println(*getisPalindrome*(num));

}

**public** **static** **int** getisPalindrome(**int** num){

**int** number =num;

**if**(number >0 && number<= 999){

**int** unitnumber = number %10;

**int** firstdigit = number /100;

**if**(unitnumber == firstdigit){

**return** 1;

}**else**{

**return** 0;

}

}**else** **if**(number <= 0){

**return** -1;

}**else** {

**return** -2;

}

}}

1. **Even Finder**

**public** **class** ECC\_05\_EvenFinder {

**public** **static** **void** main(String[] args) {

**int** num = 24;

System.***out***.println(*isEven*(num));

}

**public** **static** **int** isEven(**int** num){

**int** number = num;

**if** (number >0 && number % 2 == 0){

**return** 1;

}**else** **if**(number <=0 ){

**return** -1;

}**else** {

**return** 0;

}

}

}

1. **Greatest Number**

**public** **class** ECC\_06\_GreatestNumber {

**public** **static** **void** main(String[] args) {

**int** n1=10;

**int** n2= 45;

System.***out***.println(*getGreatest*(n1,n2));

}

**public** **static** **int** getGreatest(**int** num1, **int** num2){

**int** a =num1;

**int** b = num2;

**if**(a<0 || b<0){

**return** -1;

} **else** **if**(a==0 || b==0){

**return** -2;

}**else** **if**( a> b){

**return** a;

}**else** {

**return** b;

}

}}

1. **Least Number**

**public** **class** ECC\_06\_GreatestNumber {

**public** **static** **void** main(String[] args) {

**int** n1=10;

**int** n2= 45;

System.***out***.println(*getGreatest*(n1,n2));

}

**public** **static** **int** getGreatest(**int** num1, **int** num2){

**int** a =num1;

**int** b = num2;

**if**(a<0 || b<0){

**return** -1;

} **else** **if**(a==0 || b==0){

**return** -2;

}**else** **if**( a> b){

**return** b;

}**else** {

**return** a;

}

}}

1. **Odd Rounder**

**public** **class** ECC\_08\_OddRounder {

**public** **static** **void** main(String[] args) {

**int** num =3;

System.***out***.println(*oddRounder*(num));

}

**public** **static** **int** oddRounder(**int** num){

**int** number=num;

**if**(number<0){

**return** -1;

}**else** **if**(number==0){

**return** -2;

}**else** **if**(number%2 == 0){

**return** number;

}**else**{

**return** (number/10+1)\*10;

}

}

}

1. **Sign Finder**

**public** **class** ECC\_09\_SignFinder {

**public** **static** **void** main(String[] args) {

**int** num =34;

System.***out***.println(*findSign*(num));

}

**public** **static** **int** findSign(**int** num){

**int** number = num;

**if**(number>0){

**return** 1;

}**else** **if** (number<0){

**return** -1;

}**else** {

**return** 0;

}

}

}

1. **Even or Odd**

**public** **class** ECC\_10\_EvenOrOdd {

**public** **static** **void** main(String[] args) {

**int** num =44;

System.***out***.println(*isEvenOrOdd*(num));

}

**public** **static** String isEvenOrOdd(**int** num){

**int** number = num;

**if**(number ==0 || number <0){

**return** "Invalid Input";

}**else** **if**(number%2 == 0){

**return** "Even";

}**else**{

**return** "Odd";

}

}}

1. **Rounder**

**public** **class** ECC\_11\_Rounder {

**public** **static** **void** main(String[] args) {

**int** num=15;

System.***out***.println(*calculate*(num));

}

**public** **static** **int** calculate(**int** num){

**int** number = num;

**if**(number <0 || number==0){

**return** -1;

}**else** **if**(number%2==0){

**int** result = number\*number;

**return** result;

}**else** {

**int** result1 = number\*number\*number;

**return** result1;

}

}

}

1. Sum of Multiple 10

**public** **class** EC\_12\_SumOfMul10 {

**public** **static** **void** main(String[] args) {

**int** a=12, b= 34, c=69;

System.***out***.println(*sumOfMultiples*(a,b,c));

}

**public** **static** **int** sumOfMultiples(**int** a, **int** b, **int** c){

**int** x = a;

**int** y = b;

**int** z = c;

**if** (x == 0 || y == 0 || z == 0){

**return** -1;

}**else** **if**(x < 0 || y < 0 || z < 0){

**return** -1;

}**else** **if**(x%10==0 || y%10==0 || z%10==0){

**if**(x%10 != 0){

x= ((x/10)+1)\*10;

}

**if**(y%10 != 0){

y= ((y/10)+1)\*10;

}

**if**(z%10 != 0){

z= ((z/10)+1)\*10;

}

**return** x+y+z;

}**else**{

**if**(x%10 != 0){

x= ((x/10)+1)\*10;

}

**if**(y%10 != 0){

y= ((y/10)+1)\*10;

}

**if**(z%10 != 0){

z= ((z/10)+1)\*10;

}

**return** x+y+z;

}

}

}

1. Rounded Sum

**public** **class** ECC\_13\_RoundedSum {

**public** **static** **void** main(String[] args) {

**int** a=26, b=32, c=48;

System.***out***.println(*sumOfRoundedValues*(a,b,c));

}

**public** **static** **int** sumOfRoundedValues(**int** n1, **int** n2, **int** n3){

**int** x = n1;

**int** y =n2;

**int** z= n3;

**if** (x == 0 || y == 0 || z == 0){

**return** -1;

}**else** **if**(x < 0 || y < 0 || z < 0){

**return** -1;

}**else** **if**(x%10==0 || y%10==0 || z%10==0){

**if**(x%10 < 5){

x= x-x%10;

}**else** {

x= x+(10 - x%10);

}

**if**(y%10 < 5){

y= y-y%10;

}**else** {

y= y+(10 - y%10);

}

**if**(z%10 < 5){

z= z-z%10;

}**else** {

x= x+(10 - x%10);

}

**return** x+y+z;

}**else**{

**if**(x%10 < 5){

x= x-x%10;

}**else** {

x= x+(10 - x%10);

}

**if**(y%10 < 5){

y= y-y%10;

}**else** {

y= y+(10 - y%10);

}

**if**(z%10 < 5){

z= z-z%10;

}**else** {

z= z+(10 - z%10);

}

**return** x+y+z;

}

}

}

1. Alarm Clock

**public** **class** ECC\_14\_AlarmClock {

**public** **static** **void** main(String[] args) {

**int** day\_of\_week =3;

**boolean** onVac = **false**;

System.***out***.println(*ringAlarm*(day\_of\_week, onVac));

}

**public** **static** String ringAlarm(**int** dayOfWeek, **boolean** onVac){

**int** day = dayOfWeek;

**boolean** vac = onVac;

**if** ((day<=0 && day>=6) || (vac != **false** && vac != **true**)){

**return** "Invalid Inputs";

}**else** **if**((day >=1 && day <=5) && vac == **true**){

**return** "10:00";

}**else** **if** ((day >=1 && day <=5) && vac == **false**){

**return** "07:00";

}**else** **if**((day == 0 || day == 6)&& vac == **true**){

**return** "OFF";

}**else** {

**return** "10:00";

}

}

}

1. Boolean Value

**public** **class** ECC\_15\_BooleanValue {

**public** **static** **void** main(String[] args) {

**boolean** b1 =**true**, b2 =**true**, b3 =**false**;

System.***out***.println(*countBoolean*(b1, b2, b3));

}

**public** **static** **boolean** countBoolean(**boolean** b1, **boolean** b2, **boolean** b3){

**boolean** c1=b1;

**boolean** c2=b2;

**boolean** c3=b3;

**if**(c1== **true** && c2 == **true** ){

**return** **true**;

}**else** **if**(c1== **true** && c3 == **true**){

**return** **true**;

}**else** **if** (c2 == **true** && c3 == **true**){

**return** **true**;

} **else**{

**return** **false**;

}

}

}

1. Natural Numbers

**public** **static** **void** main(String[] args) {

**int** num1 =2;

**int** num2 =4;

System.***out***.println(*getNaturalNumbers*(num1, num2));

}

**public** **static** String getNaturalNumbers(**int** num1, **int** num2){

**int** i = num1;

**int** j = num2;

String p =" ";

**if**(i<0 || j<0){

**return** "-1";

}

**if** (i==0 && j==0){

**return** "-2";

}

**while**(i<=num2){

/\*System.out.print(i+" "); \*/

p = p+(i)+" ";

i++;

}

**return** p;

}

}

1. Numbers in Range

**public** **class** ECC\_17\_NumbersInRange {

**public** **static** **void** main(String[] args) {

**int** num1 =2;

**int** num2 =9;

System.***out***.println(*getNaturalNumbers*(num1, num2));

}

**public** **static** String getNaturalNumbers(**int** num1, **int** num2){

**int** i = num1;

**int** j = num2;

String p =" ";

i=i+1;

**if**(i<0 || j<0){

**return** "-1";

}

**if** (i == j){

**return** "-2";

}

**if** (i>j){

**return** "-3";

}

**while**(i<num2){

/\*System.out.print(i+" "); \*/

p = p+(i)+" ";

i++;

}

**return** p;

}

}

1. Reverse Order

**public** **class** ECC\_18\_ReverseOrder {

**public** **static** **void** main(String[] args) {

**int** num1 = 20;

**int** num2 =39;

System.***out***.println(*getNumbersInRange*(num1, num2));

}

**public** **static** String getNumbersInRange(**int** num1, **int** num2){

**int** i = num1;

**int** j = num2;

String p =" ";

j=j-1;

**if**(i<0 || j<0){

**return** "-1";

}

**if** (i == j){

**return** "-2";

}

**if** (i>j){

**return** "-3";

}

**while**(j>num1){

/\*System.out.print(i+" "); \*/

p = p+(j)+" ";

j--;

}

**return** p;

}

}

1. Range In Step

**public** **class** ECC\_19\_RangeWithStep {

**public** **static** **void** main(String[] args) {

**int** num1 = 10;

**int** num2 = 30;

**int** num3 = 2;

System.***out***.println(*getNumbersInRange*(num1, num2, num3));

}

**public** **static** String getNumbersInRange(**int** num1, **int** num2, **int** num3){

**int** i = num1;

**int** j = num2;

**int** k = num3;

String p =" ";

**if**(i<0 || j<0){

**return** "-1";

}

**if** (i == j){

**return** "-2";

}

**if** (i>j){

**return** "-3";

}

**while**(i<num2){

/\*System.out.print(i+" "); \*/

i=i+1;

p = p+(i)+" ";

i++;

}

**return** p;

}

}

1. Four per Line.

**public** **class** ECC\_20\_FourPerLine {

**public** **static** **void** main(String[] args) {

**int** num =16;

System.***out***.println(*getFourPerLine*(num));

}

**public** **static** String getFourPerLine(**int** num){

**int** i = num;

String p = " ";

**if**(i<0){

**return** "-1";

}

**if** (i == 0){

**return** "-2";

}

**if** (i >99){

**return** "-3";

}

**for**(i=1;i<=16;++i){

p= p+i+((i%4==0) ? "\n":" " );

}

**return** p;

}

}

1. BOX

**public** **class** ECC\_21\_Box {

**public** **static** **void** main(String[] args) {

**int** rows = 4;

**int** cols=7;

System.***out***.println(*createBoxPattern*(rows, cols));

}

**public** **static** String createBoxPattern(**int** rows, **int** cols){

String p =" ";

**if** (rows<0|| cols<0){

**return** "-1";

}

**if** (rows==0 || cols == 0){

**return** "-2";

}

**for**(**int** i=0; i<rows; i++){

**for**(**int** j=0; j<cols;j++){

**if**(i==0 || j==0){

p=p+"\*";

}

**else** **if**( j== cols-1 || i== rows-1){

p=p+"\*";

}**else** {

p=p+" ";

}

}

p=p+"\n";

}

**return** p;

}}

1. Star Pattern

**public** **class** ECC\_22\_StarPattern {

**public** **static** **void** main(String[] args) {

**int** num=4;

System.***out***.println(*createStarPattern*(num));

}

**public** **static** String createStarPattern(**int** rows){

**int** j;

String p = " ";

**if**(rows <0){

**return** "-1";

}

**if**(rows==0){

**return** "-2";

}

**for**(**int** i=1; i<=rows; i++){

**for**(j=1;j<=i;j++){

p=p+"\*";

}

p=p+"\n";

}

**return** p;

}

}

1. Number Pattern

**public** **class** ECC\_23\_Numberpattern4 {

**public** **static** **void** main(String[] args) {

**int** num=5;

System.***out***.println(*getPattern*(num));

}

**public** **static** String getPattern(**int** num){

String p = " ";

**int** k =1;

**if**(num <0){

**return** "-1";

}

**if**(num==0){

**return** "-2";

}

**for**(**int** i =1;i<= num; i++){

**for** (**int** j = 1; j<=i; j++){

p=p+" "+(k);

k=k\*2;

}

k=i+1;

p=p+"\n";

}

**return** p;

}

}

1. Check Prime

**public** **class** ECC\_24\_CheckPrime {

**public** **static** **void** main(String[] args) {

**int** num = 7;

System.***out***.println(*checkPrime*(num));

}

**public** **static** String checkPrime(**int** num){

**int** i = num;

**if**(i<0){

**return** "-1";

}

**if**(i==0 || i==1){

**return** "-2";

}

**for**(**int** j=2 ; j<= i/2; j++){

**if**(j%i ==0){

**return** "false";

}

}

**return** "true";

}

}

1. Check palindrome

**public** **class** ECC\_25\_CheckPallndrome {

**public** **static** **void** main(String[] args) {

**int** num =121;

System.***out***.println(*checkPallndrome*(num));

}

**public** **static** String checkPallndrome(**int** num){

**int** i =num;

**int** reversenumber =0;

**int** r =0;

**int** x=i;

**if** (i<0){

**return** "-1";

}

**if** (i>0 && i<99){

**return** "-2";

}

**while**(i != 0){

r= (i%10);

reversenumber = (reversenumber\*10)+r;

i=i/10;

}

**if**(x == reversenumber){

**return** "True";

}**else**{

**return** "False";

}

}

}

1. Check Armstrong

**public** **class** ECC\_26\_CheckArmStrong {

**public** **static** **void** main(String[] args) {

**int** num =1634;

System.***out***.println(*checkArmStrong*(num));

}

**public** **static** String checkArmStrong(**int** num){

**int** sum=0;

**int** x =num;

**if** (num<0){

**return** "-1";

}

**if** (num>=0 && num<=999){

**return** "-2";

}

**while**( num != 0){

**int** r = num%10;

sum = sum+r\*r\*r\*r;

num=num/10;

}

**if** (sum == x){

**return** "True";

}**else** {

**return** "false";

}

}

}

1. Factorial

**public** **class** ECC\_27\_Factorial {

**public** **static** **void** main(String[] args) {

**int** num =5;

System.***out***.println(*getFactorial*(num));

}

**public** **static** **int** getFactorial(**int** num){

**int** j;

**int** factor =1;

**if**(num<0){

**return** -1;

}

**if**(num==0){

**return** -2;

}

**for**(j=1; j<=num ; j++){

factor = factor\*j;

}

**return** factor;

}

}

1. List Factors

**public** **class** ECC\_28\_ListFactors {

**public** **static** **void** main(String[] args) {

**int** num=20;

System.***out***.println(*getFactors*(num));

}

**public** **static** String getFactors(**int** num){

String p =" ";

**int** j;

**if**(num<0){

**return** "-1";

}

**if**(num==0){

**return** "-2";

}

**for**(j=1; j<=num; j++ ){

**if**(num % j == 0){

p=p+j+" ";

}

}

**return** p;

}

}

1. Sum of Factors.

**public** **class** ECC\_29\_SumOfFactors {

**public** **static** **void** main(String[] args) {

**int** num =20;

System.***out***.println(*getSumOfFactors*(num));

}

**public** **static** **int** getSumOfFactors(**int** num){

**int** j;

**int** sum=0;

**if**(num<0){

**return** -1;

}

**if**(num==0){

**return** -2;

}

**for**(j=1; j<=num; j++ ){

**if**(num % j == 0){

sum=sum+j;

}

}

**return** sum;

}

}

1. Even Number Tester

**public** **class** ECC\_30\_EvenNumberTester {

**public** **static** **void** main(String[] args) {

**int** num1 =10;

**int** num2= 30;

System.***out***.println(*getEvenNumbers*(num1, num2));

}

**public** **static** String getEvenNumbers(**int** num1, **int** num2){

**int** i= num1;

**int** j= num2;

String p = " ";

**if**(i<0 || j<0){

**return** "-1";

}

**if**(i==0 || j==0){

**return** "-2";

}

**while**(i< j){

**if**(i%2==0){

p=p+i+" ";

i=i+2;

}**else** {

p=p+i+ " ";

i=i+1;

}

}

**while**(j<=i){

**if**(j%2==0){

p=p+j+" ";

j=j+2;

}**else** {

p=p+j+" ";

j=j+1;

}

}

**return** p;

}

}

1. Find Square

**public** **class** ECC\_31\_FindSquare {

**public** **static** **void** main(String[] args) {

**int** num =-2;

System.***out***.println(*getSquare*(num));

}

**public** **static** **int** getSquare(**int** num){

**int** i = num;

**if** (i<0) {

**return** -2;

}

**if** (i==0){

**return** -1;

}

i=i\*i;

**return** i;

}

}

1. **Find triangle**

**public** **class** ECC\_32\_FindTriangle {

**public** **static** **void** main(String[] args) {

**int** num1 =2;

**int** num2= 3;

**int** num3= 4;

System.***out***.println(*findTriangle*(num1, num2, num3));

}

**public** **static** String findTriangle(**int** num1, **int** num2, **int** num3){

**int** a = num1;

**int** b = num2;

**int** c = num3;

**if**(a == b && b == c){

**return** "Equilateral";

}**else** **if**(a !=b && b!=c && a!=c){

**return** "Scalene";

}**else**{

**return** "Iscosceles";

}

}

}

1. List of prime numbers

**public** **class** ECC\_33\_ListPrimes {

**public** **static** **void** main(String[] args) {

**int** num1 = 11;

**int** num2 = 22;

System.***out***.println(*getPrimeNumbers*(num1, num2));

}

**public** **static** String getPrimeNumbers(**int** num1, **int** num2){

String p = " ";

**if**(num1<0 || num2<0){

**return** "-1";

}

**if**(num1>=num2){

**return** "-2";

}

**for**(**int** i = num1; i<=num2; i++){

**int** k;

**for**(k=2; k <= num2; k++){

**if**(i%k ==0){

**break**;

}

}

**if**(i==k){

p=p+i+" ";

}

}

**return** p;

}

}

1. Prime number system.

**public** **class** ECC\_34\_PrimeNumbersSum{

**public** **static** **void** main(String[] args){

**int** num1 =2;

**int** num2 = 10;

System.***out***.println(*getPrimeNumbersSum*(num1, num2));

}

**public** **static** **int** getPrimeNumbersSum(**int** num1, **int** num2){

**int** sum=0;

**if**(num1<0 || num2<0){

**return** -1;

}

**if**(num1>=num2){

**return** -2;

}

**for**(**int** i = num1; i<=num2; i++){

**int** k;

**for**(k=2; k <= num2; k++){

**if**(i%k ==0){

**break**;

}

}

**if**(i==k){

sum = sum+k;

}

}

**return** sum;

}

}

1. String weaver.

**public** **class** ECC\_35\_StringWeaver {

**public** **static** **void** main(String[] args) {

String s1="Sudaksha";

String s2="Educatio";

System.***out***.println(*getWeavedString*(s1, s2));

}

**public** **static** String getWeavedString(String s1, String s2){

**if** (s1.equals(**null**) || s2.equals(**null**)){

**return** "-1";

}

**if**(s1.length() > s2.length()){

**return** s2+s1+s2; }

**if**(s1.length() < s2.length()){

**return** s1+s2+s1;

}

**if**(s1.length() == s2.length()){

String A0 = String.*valueOf*(s1.charAt(0));

String A1 = String.*valueOf*(s1.charAt(1));

String A2 = String.*valueOf*(s1.charAt(2));

String A3 = String.*valueOf*(s1.charAt(3));

String A4 = String.*valueOf*(s1.charAt(4));

String B0 = String.*valueOf*(s2.charAt(0));

String B1 = String.*valueOf*(s2.charAt(1));

String B2 = String.*valueOf*(s2.charAt(2));

String B3 = String.*valueOf*(s2.charAt(3));

String B4 = String.*valueOf*(s2.charAt(4));

**return** A0+B0+A1+B1+A2+B2+A3+B3+A4+B4;

}

**return** " ";

}}