{

    "": {

        "prefix": "binary\_exponentiation",

        "body": [

          "//for a^b",

          "ll binExpo(ll x, ll y)",

          "{",

          "    ll ans=1;",

          "    while(y > 0)",

          "    {",

          "        if(y & 1)",

          "        {",

          "            ans= (ans \* x) % N;  // x^3, x^5, ..... odd power ",

          "        }",

          "        x= (x \* x) % N;  // x^2, x^4, x^8, .......... even power",

          "        y >>= 1; // 4 --> 100 the left most bit is set for which we will get ans in which the power of x is odd,",

          "                 // thus going to get the result which we will return   ",

          "                 /\* y>>=1 means we run loop for log(y)  times\*/",

          "    }",

          "    return ans;",

          "}"

        ],

        "description": ""

      }

}